



**T2P International Scientific Conference**  
**Organized by 17 partners under the ERASMUS+ Capacity Building Program**

# **THEORY TO PRACTICE AS A COGNITIVE, EDUCATIONAL AND SOCIAL CHALLENGE**

***BOOK OF ABSTRACTS***

**Mitrovica, Kosovo, 17<sup>th</sup> – 18<sup>th</sup> September 2020**

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*University of Ljubljana*



**Theory to Practice as a Cognitive, Educational and Social Challenge**

17<sup>th</sup> -18<sup>th</sup> September 2020, Mitrovica, Kosovo

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**P R E F A C E**

Today the relationship between theoretical and practical approaches is becoming more integrated and interconnected. Therefore, it is important to explore the possibilities how to connect theory and practice - the general education and the specialized training - in the most effective and appropriate manner. In this context, the increase of the efforts regarding more cooperative, spherical and holistic approaches arises the demand for launching interdisciplinarity between many human, natural, social and technical fields.

The Theory to Practice as a cognitive, educational and social challenge conference (T2P) aims to find out whether the scientific and social reasons can lead to interdisciplinary approaches? Is cooperation between different academic areas achievable? What could pedagogues and engineers, bio-scientists and philosophers, agronomists, economists and mechanical engineers, natural scientists and writers -and so on- have in common?

T2P brings together a variety of experts from the region and beyond to present current research and cases which address the topic of theoretical and practical approaches, particularly as it is relevant to the challenges of the Western Balkan region and beyond. In particular, participants are exploring:

1. Explore interdisciplinarity as nowadays challenge, proposition, and practice in the field of scientific research, education, politics, and society
2. Networking with educational institutions who are active in interdisciplinary areas at the Western Balkans, EU and beyond
3. Developing HEI regional capacity to lead academic events and activities using EU and another best world expertise.

Having the considerations mentioned above as a starting point, the T2P consortium (under the Erasmus + Capacity Building Program) proceeds to the implementation of the 1st International Scientific Conference, hoping to highlight particular aspects of the issue and to become a forum for a fruitful scientific, educational and social dialogue for everyone who might be interested.

This conference gives visibility to successful sustainability initiatives and promote cooperation for sustainable education development in the region.

*The T2P Conference 2020 Organizing Committee*

*Editors*

*Prof.dr. Mihone Kerolli Mustafa*

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## **Key Speakers - Abstracts**

**FDI Spillovers in Services and Manufacturing Sectors of Host Countries.  
Empirical evidence from Croatia and Slovenia**

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**Abstract**

One of the main benefits of Foreign Direct Investment (FDI) is that the superior knowledge and technology of foreign firms will spillover to domestic firms in related industries. There is a vast literature investigating FDI spillover effects on the productivity of domestic firms in both developing and transition economies. This literature, however, has mostly focused on the manufacturing sector. This paper investigates the spillover effects in both services and manufacturing, separately, by applying dynamic panel data techniques to the firm-level data for Slovenia and Croatia. Unlike most studies which are based on the pre-crisis period, the paper covers the 2006-2014 period, thereby allowing the investigation of the nature of spillovers during the period of financial crisis and the accompanying credit shortage in the two countries. The paper finds that FDI spillovers are not, as expected, always positive and that they are country and industry specific and are affected by the global financial crisis. Policy makers may wish to provide greater incentives for some type of FDI with positive spillovers rather than for any kind of FDI. Furthermore, understanding the pattern of FDI spillovers during crisis has practical implications that stretch beyond the period under consideration in this paper and may prove particularly beneficial to policy makers at the time the world is grappling with economic crisis following the Covid-19 pandemic.

*Key words: FDI, spillovers, services, manufacturing, Croatia, Slovenia.*

## **Collaborative Partnerships in Higher Education: Academic and Political Rewards**

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### **Abstract**

Educational exchange programs, scholarships, studying or/and completing practical training periods abroad are essential to widen the horizon of future economic and societal leaders. Students are usually open minded, communicative and the years of their formation are fertile periods to plant and help growing life-long partnerships across political and disciplinary borders. Doing things together automatically expose the participants to different views, perceptions, assessments, approaches and aspirations. The fabric of these interwoven experiences is an excellent basis for sustainable regional cooperation and prosperity. Among many educational exchange programs launched by the European Union or its predecessor organs, the TEMPUS PHARE program aimed to assist the transition process of tertiary educational institutions in Poland, Hungary and then Czechoslovakia (later Czech Republic and Slovakia) in the mid-1990s can be characterized as a well-conceived, adequately funded successful endeavour. It was launched in a time when the expansion of the EU was not only politically aimed, but also widely supported by the EU populace. The timely and generous assistance saved many educational institutions from unbearable stresses of the transition process. Partnerships may aim primarily to build up capacities in the target countries, but both donor-recipient and partnerships between recipients are essential on a long term basis. Individual students and trainees participating in these schemes might gain not only excellent educational exposure but also potentially job experiences in developed countries. Skills, which may pay excellent dividends upon returning into their native countries. Well designed and balanced partnerships can be effective to foster long term cooperation even beyond the education sphere and counteract illegal economic migration. Two German-African cooperation schemes WASCAL and SASSCAL can be mentioned and introduced whereby educational institutions and countries in West and South Africa respectively participate with each other and German and international partners in building up science services to assist the adaptation to climate change impacts and devise land-use policies and practices for regional food and environmental security.

*Key words: higher education, partnership, projects.*

## **Social Security in the Balkans: Challenges and Future Perspective**

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### **Abstract**

The social security is one of the main concerns of the Balkan states due to pressing social problems embracing high unemployment, widespread poverty, brain drain, ageing population, and falling birthrate that put a heavy strain on operational state and efficiency of the social security system. A serious problem for social security is posed by its growing dependence on the development of other security areas, especially political, economic and cultural. At this level, there appears a problem of compatibility and synergy of actions to create mechanisms that enable counteracting and effective response to the existing security threats e.g. crisis democracies, the revival of ethnic tensions, risks of secession, hybrid threats, migration from war-torn countries, lower economic growth, unstable access to energy resources. Having in mind all the problems indicated above, the article aims to examine the main issues of the social security of the Balkan states visible in several fields including social policy, pension systems, health care systems, disability insurance, poverty, labour policy and unemployment. The framework for this study is built on understanding social security as a mechanism for both meeting human needs and for protecting against social risks. Therefore, social security is seen as becoming a key factor in promoting peace, stability and prosperity for the national state as well as for the Balkan region. There have been applied desk research and comparative analysis methods. This study should answer the following questions: What are the current problems of social security development in the Balkan states? What measures should be taken to ensure the development of social security in these states and to sustain stability in the Balkan region? The research indicated that the main challenges for the social security of the Balkan states are the reorganization of the social policy and sectors towards the development and launch of programs and mechanisms enabling an optimal response to the main social risks-high unemployment and poverty.

*Key words: social security, Balkans, pension systems, health care systems, disability insurance, poverty, labor policy and unemployment.*

## **Can Cooperatives Help to Integrate Small Farmers in Modern Value Chains?**

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### **Abstract**

Globalization, rapid competition, quick technological change, and choosier customer constrain firms to develop production and distribution structures. Nowadays, questions of food safety and quality (particularly related to credence attributes) are getting more important. Hence, in all most all countries, food quality has become a tool of differentiating products, at the same time food safety has turned into a competitive necessity. Accordingly, suppliers have to comply with changing and on behalf of this rapid development, they have an interest in collaboration. Thus, observing the changes in the agri-food business it is getting evident that more strictly coordinated supply chains evolve. The aim of the paper is to research the following topics. In the context of a supply chain network, the question arises whether small producer (particular in transition economies) can survive. A wide range of trends drives networks to guarantee credence product attributes to consumers. On the small producer side, the aims are to stay on the market and increase their power. As a consequence, suppliers have to develop their products for the required quality level, to achieve their objects. The only way to do so is by forming horizontal collaborations to reduce their production risks and costs. Whereas co-operatives face a conflict because due to their business principles they are obliged to nurture the business aims of their members. Thus, the management of co-ops has to work out strategies on how they can combine the demands of the supply chain network with the demands of their members.

*Key words: supply chain, agri-food business, chain network.*

## **Spin off. Entrepreneurial University Ecosystem**

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### **Abstract**

University spinoffs have remarkably strengthened the linkage between universities and industry. The number of technology patents and spinoffs coming out of university research has a significant impact on regional economic and social development. Typical examples are Silicon Valley and the Boston Area in the US, as well as Cambridge and Oxford in the UK. In Europe, most examples are coming from Germany. However, there are still lacking attention in European countries in particular in Italy. Governments and universities are seeking to develop framework conditions that are conducive to spinoff creation. The most prevalent of such initiatives are legislative changes at the national level and the establishment of Technology Transfer Offices at the university level. The effectiveness of such initiatives is debated, but empirical evidence is limited. This lecture will try to tackle simple questions; when, why and how to create spin off company.

*Key words: spinoff, technology, university, ecosystem.*



## **1. Educational Theory and Practice**

- Pedagogical, Educational, and Teaching Theory
- Policies on Education, Orientation, and Structures of Education
- Curriculum, Supportive and Teaching Materials

## **The Importance of Provision of Lifelong Learning Programs in Higher Education Institutions in Kosovo**

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### **Abstract**

Today's education is characterized by dynamic development and the necessity for new skills and professional advancement is continuously growing. Taking in consideration the rapid change of the labor market and in the society in Kosovo, the academic qualifications or the learning that is gained in a certain phase of life cannot be expected to fill out all the requested knowledge and skills of an individual that might need throughout the career life. This paper will present the importance of the organization of lifelong learning (LLL) programs in higher education institutions (HEI) in Kosovo, and how the provision of different LLL programs can support students and the community, in general, to get involved in the process of lifelong learning as well as to acquire skills and competencies which are in demand in the labour market. The lifelong learning concept, as well as studies and academic articles of this field, are of very limited in Kosovo. This study gives an examination of the current situation of LLL programs in HEIs in Kosovo, it reflects the importance and the necessity of the provision of LLL programs by the HEIs. The study also brings some comparisons of the trends and developments of LLL in higher education institutions in other countries and the models for LLL that HEIs in Kosovo should follow.

*Key words: lifelong learning, higher education institution, skills, Kosovo.*

## **Educational Methods and Approaches in the Teaching of Natural Sciences**

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### **Abstract**

Educational processes at all levels are crucial for the development and functioning of society and each individual. The elementary school achieves a high degree of child involvement and is thus a school, the main form of organized pedagogical work, through which the social environment directly influences the individual and social development of entire generations. The knowledge, skills and attitudes acquired in the subjects of the natural sciences provide the student with better knowledge and understanding of the world around him, easier guidance in the natural and social environment, and decision making about personal prosperity. Today, we must deal with the acquisition of knowledge in the natural sciences, on which progress is based. Within the education system, the emphasis is placed on the quality of learning and the best teaching methods. This paper presents the results of examining which methods, students acquire knowledge of natural science teaching. Contribution and emphasis of teachers in adopting professional terminology. Forms, methods, approaches that may be easiest in acquiring quality knowledge. Information technology in natural science teaching must be applied. In this context, it is necessary to further educate teachers and provide them with additional literature.

*Key words: natural sciences, teaching and knowledge, teacher, teaching technique.*

## **Influence of Comprehensive Curricular Reform on Outcomes of Upbringing Subjects in Elementary Classes**

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### **Abstract**

Comprehensive curricular reform through an extensive School for Life program is a major innovation in the Croatian education system. It has brought many changes to the basic documents and it is important to examine these changes and explore how much they have positively affected the performance of subjects and the learning outcome. The methodology of this research is qualitative and a comparative analysis was performed comparing the Curriculum (2006) and Curriculum (2016; 2019) for educational subjects Music Culture, Art Culture and Physical and Health Culture. The main goal is to highlight the changes brought by the new curriculum of educational subjects and how they have reflected on educational theory and practice. News that appeared in the new curricula were singled out and analyzed. Positive changes are visible in terms of the greater connection between theory and practice, emphasis on experiential learning and individualized approach to students. Teachers are given more freedom in planning, preparing and conducting classes. Some upbringing steps have also been taken, such as avoiding stigmatization and emphasizing the specifics of students. One of the main innovations is the development of critical thinking and opening the way for modern teaching. There is a lack of major interventions in the teaching content. The evaluation also remains a big issue, where clearer criteria are adopted, but when it comes to upbringing subjects, more thorough changes are still needed.

*Key words: curriculum, evaluation, upbringing, the school for life.*

## **Learning Engagement and Outcomes in an Undergraduate Course Using Flipped Classroom Environment**

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### **Abstract**

The study presented in this paper analyses the effects of flipped classroom model to enhance students' learning engagement in the Financial Mathematics Course (FMC), from the Accounting and Management Degree, at the Porto Accounting and Business School (ISCAP), one of the eight schools of the Polytechnic of Porto (P. Porto). Flipped learning has been pointed out as a powerful instructional method to enhance student engagement. Usually, it presupposes students "pre-study" of online materials at home and then participating in more meaningful learning activities in the classroom. This paper tries to establish the eventual relations that such strategy takes with active learning practices and discuss its success, analysing how flipping may influence student's achievement and contribute to better and fruitful engagement in this course. The participants of this study consisted of 75 students enrolled in 2019 and 51 students in 2018, Winter Semester. The online survey results analysis indicates that the integration of the flipped classroom into the educational process led to an increase in students' motivation and interest in studying Financial Mathematics. Furthermore, it has a positive impact on students' determination and autonomy because students take on responsibility for their learning. The relationship between the results obtained in the final exam and the online quizzes carried out by the students were analysed. The research findings of this study confirmed the importance of this model since the enrolled students tend to score significantly higher than students in the traditional classroom.

*Key words: flipped learning, student engagement, higher education, online learning.*

## **The Impact of High School Core Courses on First-Year Student Success. Case Study: Biology vs Engineering**

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### **Abstract**

This study is based on data collected from student questionnaires during the 3 years (2017-2020). It analyzes some engineering programs and biology as well. It is found that the higher students rate who have attended the elective courses in high school, the smaller the difficulty rate they encounter during the first year of university. In the same way, the impact on repetitions in different courses was analyzed, as well as on the success of the first-year student. By comparing the data between the two study periods, which represent two groups of students, those who have completed high school with the objective-based curriculum and students who have completed the new high school curriculum based on learning outcomes according to competencies, there appears to be a significant improvement on student success. The results show also that attending elective courses during the last year of high school has had a significant improving impact on student success. Based on these data, this study strongly recommends that university structures should cooperate closely with secondary education institutions. But at the same time, the universities must review their admission criteria and match them as well as possible with the secondary education program and its structure. There should also be an extended involvement of academic structures in reviewing and improving course content in the first year in line not only with the learning outcomes of the program but also in reflecting the level of achievement results of admitted students.

*Key words: course, student, impact, engineering, biology.*

## **Kosovar Teachers' Attitudes Towards Distance Education and Their Needs for Professional Development Training**

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### **Abstract**

The purpose of this research study is to investigate K9 Kosova teachers' attitudes toward distance education and identify their needs for professional development training, especially after the experience during the pandemic COVID-19. The research will identify the challenges that teachers face in the implementation of online classes, which hinder teachers and students from using technology as a means of education. The research uses a qualitative research design with in-depth interviews as the main instrument of the study. Participants were selected among public school teachers who have shifted from face-to-face to online education. Selected participants are subject to convenient accessibility and are willing to participate in the research study during the non-instructional time without remuneration or other compensation. In-depth interviews were conducted with 12 teachers – across Kosova, with a subject combination. Each interview will be transcribed, thus creating a multi-case study, which was followed by within and cross-case analysis. All transcribed interviews will be cross-checked by the authors as well as participants themselves, which will ensure accuracy in the research interpretation. Once the cross-check is finished, the authors will generate codes and conduct further analysis. The research findings will investigate the changed attitudes towards the adaptation of online learning and the challenges of implementing blended education. As a result, the study will bring about needed professional development training for K9 teachers to implement blended learning in the future.

*Key words: teachers' attitudes, online/distance education, technology, training/professional development*



## **Diversifying Time-Massed Teaching through Activity-Based and Problem-Based Approaches: Its Influence on the Students' Academic Performance in Elementary Statistics**

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### **Abstract**

The main goal of this study was to find out the effects of diversifying time-massed teaching with activity-based (ABA) and problem-based (PBA) in the academic performance of the students in Elementary Statistics. This study was conducted in the second semester of SY 2010-2011 utilizing the 2nd-year students in the Department of Tourism of Caraga State University, Cabadbaran City, Philippines. A pretest-posttest without control group quasi-experimental design was employed utilizing three sets of instruments-a forty(40)-item validated researcher-made test questionnaire, worksheets for ABA, worksheets for PBA. Finally, data obtained were analyzed using the per cent score, mean, standard deviation, and coefficient of variation to describe students' academic performance, and t-test for independent samples and paired t-test to compare students' academic performance. Based on the findings of the study, the following conclusions are drawn. Activity-based approach and problem-based approach prove to affect positively students' performance in time-massed teaching of Elementary Statistics. ABA and PBA are equally effective in improving students' performance but differ only in diversifying time-massed teaching. Students' achievement in each stage of the activity-based learning varies significantly and is independent; that is, ABA in time-massed teaching is based on the current knowledge or meaningful experience that provides some kind of reinforcement of the fatigue acquired during time-massed teaching. Problem-based learning, on the other hand, is both varying and dependent on a series of learning tasks; that is, PBA provides the drive that conditions the reactive inhibition brought by fatigue. The combination of both approaches in time-massed teaching will increase reaction potential; thus, producing the optimum performance of learners specially when learning is massed.

*Key words: education, teaching approaches, student performance, future study.*

## **Distance Education in 2020 Albania**

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### **Abstract**

The latest situation has paralyzed the whole world, including Albania, and allowing only a few selected professionals to work, among them educators. One more time, the importance of education has been highlighted. This paper provides insights into the current developments of education in Albania due to COVID-19. Distance education is a novice in Albania. Thus, previous work addressing this topic lack or are very few. Reflecting on the way education is being provided this period, the article intends to analyze the new education approach, that of distance education, and the way it effects on students' learning process, perception about education and their overall academic results through semi-structured interviews for teachers and questionnaires for students. The article reveals that both challenges and opportunities come along with distance learning. Consequently, distance education is a quick response to the isolation situation that has its advantages such as keeping up students with the education, flexibility in engaging students with learning, practising new skills through ICT, and promote self-learning. Some of the challenges include the shift in perception regarding the process of learning and what learning implies, the impossibility of all students to access internet and computers, the lack of interaction and the scepticism regarding this new approach of education in Albania. These results demonstrate that Albania needs to improve and further implement computing technology in teaching.

*Key words: Albania, e-learning, ICT, distance education, distance learning*

## **Legal Clinics as a Tool to Introduce Law Students to Practicing Law**

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### **Abstract**

Teaching law to students who have decided to attend a law school is challenging in modern times. In the past, law students concentrated on learning theoretical approaches to the law. Only on rare occasions did they have the opportunity to attend court sessions only as temporary visitors. During these visits to the court, the students could see the difference between the theoretical approach they learned at law school and the law practised by judges, prosecutors and attorneys. The development of legal clinics in law schools in USA and UK intended to teach students about practising the theories and statutes they learn about during their formal education and ex-cathedra classes. Thus, students work with law practitioners, usually attorneys, in real cases and develop their legal reasoning by submitting legal briefs and other documents that are then presented by the supervising attorney at court. In this way, students become active protagonists in legal cases as opposed to mere spectators in court proceedings. Therefore, they are better prepared to join the practising of law once they have graduated from law school. It is a win-win situation: the students learn to practice law and are better prepared for their future profession whereas the courts gain better qualified young law practitioners. This paper will analyze the development of legal clinics in the Western Balkans and more closely in North Macedonia as compared to USA and UK. It will address the issues related to law schools and legal education and the challenge of introducing practical versus theoretical approaches concerning teaching law.

*Key words: law, legal clinic, education, theory, practice, North Macedonia.*

## **Information and Strategy in the Educational Process**

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### **Abstract**

Reaching the necessary information in the teaching and learning process is the primary task of the latter. This information is achieved and supplemented even more in the integration of technology using different strategies. Since nowadays students are in constant contact with advanced technological tools, then their involvement in the educational process is seen as a great predisposition of interest. The general thesis that education and research and the use of different strategies in the teaching and learning process to arrive at accurate scientific information cannot be separated. This need for such an increasing and more frequent use of various technological tools and strategies was evident in the situation created by the total closure of people during the COVID/19 pandemic when the educational process is completely developing. online. Based on scientific research data, it always stands out that more accurate information, especially in social subjects, is achieved faster and better when using different strategies, through technological tools. Precisely, this paper aims to highlight these strategies, and their application to access information in the educational process. Not only in the Albanian reality but worldwide, technological education is an essential component in teaching. This is because, through technological education, students increase competence, self-confidence, become more proactive and develop the ability to control the elements of the physical environment.

*Key words: information, strategy, teaching, technology, technological tools, research.*

## **Towards Defining a Conceptual Framework for University Development: A Stabilization, Optimization and Competition Model**

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### **Abstract**

Higher education development is a global challenge in meeting the societal needs of a country. Countries are struggling to define relevant developmental policies of higher education, that engage proper university development. This is particularly important in countries with relatively numerous universities financed with public funds. There is a lack of a sustainable model for supporting and empowering university development, and guiding national policies for higher education in that direction. This paper aims to define a conceptual framework for higher education development, targeting universities financed with public funds. The study uses an inductive approach, with an observation from higher education and research policies in Kosovo, and suggests a three-stage theoretical concept for university development, which are stabilization, optimization and competition. The university development is described and explained throughout these stages, and the model outcomes and implications are discussed.

*Key words: higher education, university development, theoretical conceptualization.*

## **Understanding the Development of Student Teacher's Self-Efficacy and Professional Identity in School Placement**

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### **Abstract**

Teacher knowledge and practices have increasingly become a research area of considerable interest. Through effective mentoring practices in school placement, student teacher's learn new concepts or approaches to teaching in the classroom. Student teachers' early career experiences are mainly related to classroom management skills and their own professional identity as a teacher. The purpose of this study is to understand how student teachers develop their self-efficacy in classroom management during school placement and how they describe their influence in constructing their sense of professional identity. This qualitative study collected data from 10 pre-service student teachers (4th year of studies at bachelor level) of the Faculty of Education at the University of Prishtina and 10 primary school mentors. Data are collected through semi-structured interviews, while they are analyzed through the thematic analysis method. The results indicate that except developing classroom management skills, student teachers were constructing values as a professional teacher. Teaching practice, in particular mentoring experience, had enabled them to start clarifying their beliefs and values about teaching and learning. This study provides practical examples of how school mentors can positively influence and develop student-teacher practices for classroom management, in turn, foster the construction of professional identity.

*Key words: professional identity, school mentor, student teacher, self-efficacy, school placement.*

## **Correcting Students' Errors in English Writing: From Theory to Practice**

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### **Abstract**

Making errors is inevitable while learning a second or foreign language. However, the error correction techniques and ways of giving feedback to students are critical for improvement and learning. This paper aims to examine the ways of error correction to students' writing and their influence on students' writing performance. Furthermore, the paper seeks the answer to the question if teachers in their everyday situations provide suitable error correction, as recommended by the relevant literature. The assumption is that if the teachers know students' error correction preferences and act according to them, it can lead to students' improvement in language learning and better development of the writing skill, in particular. One hundred and twelve (112) elementary school students from Mitrovica, Kosovo and three (3) English teachers participate in the study. Findings are based on data analysis from students' and teachers' questionnaires especially created for this study. The recommendations are expected to be useful for all current and prospective English teachers.

*Key words: errors, writing, preferences, techniques, performance.*



## **The New Challenges of the Law Curriculum According to the Higher Education Law in Albania**

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### **Abstract**

The paper's aims are general research on Albanian Higher Education Law, its new approaches to the implementation of new structures on the higher education system in Albania with a specific evaluation of the implementation of new curricula and academic programs on Law Faculties in Albania. The abolishment of the Bologna system on law programs, the problems created during its implementation needed new improvements of the programs starting by a total restructuring of higher education institutions, study plans as well as the drafting of new curricula that would respond to the legal changes implemented by the Law on Higher Education. Law no. 80/2015 in its content gave life to a reformulation of Law programs differently from the previous one, leaving specific tasks for higher education institutions to design the respective curricula. This brought that, the new academic year 2020-2021 will find Law Faculties, in private and public universities in Albania, with new study programs, with a plan that goes from the 3 + 2 curricula to the 5-year, master's integrated degree program. Law Faculties will face, for the first time, this new challenge. The methodology will consist of a compared study of legislation, recommendations of international institutions on the evaluation of higher education institutions of Albania, policy papers on identifying the causes why higher education needs improvements on its programs, and why this started up from the law faculties. Analysis of the historical improvements of higher education structures and programs, the strengths and weak points of each reform, and the social and economic impact of the new law program in the alumni future will be another methodology component.

*Key words: Albanian legislation, higher education institution, alumni, law program, economic and social impact.*

## **Covid-19 and its Effect on Education System: Case Study Suhareka**

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### **Abstract**

Coronavirus (2019) is a new virus which has not been identified previously. It is defined as a type of disease caused by a novel-corona virus which is known as acute respiratory syndrome coronavirus 2 (CoV-2). It's formerly known as 2019-nCoV) this disease effect and affecting every field of human life. Since the end of last year until today the world is facing a pandemic due to the well-known the effect of this pandemic has also affected the education system thus becoming a challenge for which potential scientists have not yet been able to find a solution. The impact of the coronavirus on education has affected all levels, especially that of primary education. In this study, we will address the ways of accessing distance education offered for primary school student and especially for children with special needs. A study conducted for schools in the municipality of Suhareka which have students with special needs, shows that over 70 percent of cases did not attend school at all during this time, while the other children have followed them in the vast majority except for a few individuals.

*Key words: Covid-19, children with special needs, transformation, Effects of COVID-19 on education system.*

## **Interactive E-contents to Support Students' Engagement – Challenges and Practices in an Erasmus+ Project**

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### **Abstract**

The development of open educational resources (OER), scientifically and pedagogically certified, with direct and free access, has been promoted by the highest levels of government institutions, driven as one of the general indications that should direct those responsible for the academic progress of the new generations. This has been supported by the proliferation of LMS platforms that empower the development of different instructional strategies like the flipped classroom, b-learning, among others teaching and learning options. In this sense, a question arises: "What kind of content can motivate the common user to learn about a certain subject?". Motivate to the pursuit and complete a certain set of tasks with a given final objective - to acquire knowledge or skills in a given topic. In this paper, some OER developed for the Erasmus+ Project EngiMath will be presented. These are being developed by the project partners from six European countries, trying to innovate in the teaching-learning process and are based on the creation of interactive teaching and learning e-contents. These resources, built upon animated presentations, are transformed into SCORM packages for the Moodle platform, with the support of iSpring Suite 9 software, to promote students' interaction and avoid drop out behaviours. This option will be described, giving a special focus on the active connexion between the learner and the learning system, crucial to reinforce student's engagement with the presented resources, promoting active learning and self-awareness of the proposed teaching/learning path.

*Key words: OER, higher education, online learning, learning engagement.*

## **Comparing Stakeholders' Views on the Entrepreneurial University Metrics – The Case of POLIS University**

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### **Abstract**

Higher Education has been constantly under the pressure to “cope” with the fast paced development in terms of the labor market, technology and ultimately society’s needs. It has become evident that to equip their graduates with relevant competencies, universities must provide the so-called 21st Century skills: choice, collaboration, communication, critical thinking and creativity. However, there is a growing awareness that the university itself must become more entrepreneurial in the way it operates. This is, however, an objective ‘tricky’ to translate into practice: not only are the metrics of being entrepreneurial still far from being well defined but also the way they are assessed by the different stakeholders of a university varies, sometimes substantially. This article makes use of HEInnovate, a self-assessment tool designed by EC and OECD to explore such varying perspectives, based on the case study of POLIS University. The findings can shed some light on the effects that the entrepreneurial agenda can have if the carrying (or even conflicting) perceptions from the school’s stakeholders play and its impact.

*Key words: entrepreneurial university, HEInnovate, POLIS University.*

## **Albanian Technical Terminologies as a Special Vocabulary and its Challenges in the XXI Century**

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### **Abstract**

In the conditions of the rapid development of technics and technology in recent years, the cooperation of the scientific-technical language with the standard Albanian language is continuing with a higher intensity than before. We notice a vigour of enrichment in the vocabulary of technical terminology, due to the creation and formation of new fields and subfields of technics, technology, also computing, mechatronics, telemetry, a multitude of concepts many of which, on one hand, are marked with names of the languages they come from, mainly from English, but on the other hand, they meet their needs with the lexical mother tongue composition (by common words being raised to terms) and with the activation of other layers, such as word-combination (word-group) terms. In this paper, in a more pronounced way, we are exploring with priority the formation process of terms from common words in technical terminologies (mechanical, electrical, construction). The influence of the scientific-technical language on the general one will be further strengthened in future, because science and its language are beginning to play an increasingly more important role on the development of culture in general.

*Key words: terms, Albanian technical terminology, problems, tasks, XXI century.*

## **Creativity, Business Education and Arts: Teaching Art History to Business Majors**

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### **Abstract**

The case of Steve Jobs' auditing a calligraphy class at college, which he later credited for Apple's splendid typography, indicates the importance of grasping a variety of ways of thinking and acting for innovation also in business education. While liberal arts courses have been knocked out of the European curriculum, on account of its specialization, even before the reduction of the undergraduate higher education cycle to 3 years, as per the suggestions of the Bologna process, American-style education still puts much emphasis on liberal arts, including Art History. This persistence is not without problems. As Colcy et al. have concluded, the articulation of liberal arts courses in the business education curriculum is more often than not weak, taught by faculty from different departments or schools without linkages with Business colleagues and fairly little, if any, attempt to cross the barbell, thereby not serving the need to promote high-quality interconnected learning required today. Combined with student motivation to focus more on career preparation, teaching humanities in the Business School is a challenge. Art History, as well as other courses in Humanities, can broaden this initially narrow scope if students realize how art historical perspectives open up and provide materials in matters of concern to them. In this frame, this paper presents some good practices on how Art History can be integrated into the Business curriculum. I shall focus on the 1744 icon of the Nativity of the Virgin by painter Constantine of Shpat for Ardenica Monastery to illustrate how one can help students think about marketing in pre-Marketing times. The icon was sponsored by the guild of haberdashers of Voskopoja. The unnecessary proliferation of little objects of the sort traded by haberdashers would indicate an effort of the guild to display its merchandise in visual media in revered places where opinion leaders can be impacted. I am arguing that an integrated business approach to Art History can provide enlightening glimpses of alternative ways of thinking to Business major students.

*Key words: creativity, business, education, art history.*

## **English Foreign Language Teachers Challenges in Meeting Students' Needs in Online Classes During the Period of Corona Virus Pandemic**

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### **Abstract**

It seems that teaching online learning in our country was very challenging for most teachers as well as students because most teachers have not experienced online teaching. However, this "unexpected" experience challenged English Foreign Language (EFL) teachers but also encouraged them to somehow develop professionally and try to become 'strategic teachers'. To achieve the purpose of this study, the research is done in cooperation with seven EFL teachers of the schools in the municipality of Gjakova. This research is an exploratory research conducted by interviews that are used to find out if teachers were obliged to use other strategies that they have not used before to meet the requirements of all students, regardless of their English language skills. Teachers were asked to send written reflection reports on the teaching process during the pandemic time. The present study is focused on two main research questions: To what extent have EFL teachers managed the online classes?.... and What challenges did English foreign language teachers face during online classes? The results show that the teachers are satisfied with online teaching process but always remember the challenges they faced, as they pointed out: Problem with internet access, lack of technological equipment for each individual, lack of attention during class, wasted time giving instructions to different groups of students, lack of physical materials for activities, extra tuition for students seeking individual work or individual communication with the teacher, etc. As a result, education appears to have changed teaching strategies dramatically during the pandemic.

*Key words: EFL teaching methodology, online classes, teachers challenges, IT tools.*

## **Contradicting Views on the Social Dimension in Cooperatives - A Source of Tension?**

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### **Abstract**

Regarding the understanding of cooperatives, two structural design schools have emerged in the literature of cooperative science. We assume that contradicting views associated with contradicting expectations on the role of the cooperative can be a reason for tensions and therefore, foster the resignation of members. If one considers the topic of cooperatives in the German wine industry, one increasingly encounters the problem of declining membership and the associated reduction of cooperative vineyards (DRV 2016). Can the understanding of the co-op lead to contradicting expectations, creating tensions between the members and thus to member resignation? This work considers the different internal understandings of the co-op members alongside the originating expectations by the means of case studies within two German wine cooperatives. To obtain a complete picture, not only the members are included, but all internal interest groups (e.g. CEO, board members etc). Based on theoretical assumptions and expert interviews, a model was created which represents the formation of the members' perspectives. Based on the perspectives conclusions can be drawn on the existing field of tension within the cooperatives. Our main result shows, that a change in the view or role of the cooperative can therefore be a reason for the resignation of members. Further results indicate that member heterogeneity can be seen as a significant factor influencing members how they see the role of their cooperative. The results showed a different understanding between "normal" members and members being part of the management and partially as the board.

*Key words: wine cooperatives, case studies, cooperative models, governance, membership segmentation and expectations*



## **The Importance of Higher Education for Albanian Girls and Women. Case study Kruja**

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### **Abstract**

Education equips girls and the women of Albania with a peaceful weapon to fight against gender disparities. With education, they have a greater opportunity to climb the ladder of their professional or social careers. For Albanian girls and women, some obstacles are in the way to prevent them from pursuing higher levels of education. Mainly disparaging mentality, fanaticism, negative opinion, economic opportunities are seen as the main obstacles. Albanian girls and women face these obstacles and despite them, many girls and women are educated and continue to be educated to the highest levels of education. As claimed by them, education for girls and women is a unique opportunity to escape from the clutches of life's problems, a life jacket that they can hold onto when the waves hit. The significance of this study lies in the fact that it is the only one of its kind devoted to the Kruja girls and women so far. The importance of the studied problem lies in presenting the situation of girls and women as fragile beings, with the prejudices and mentalities that surround them in their livelihoods, as well as their ongoing efforts to educate themselves and move forward.

*Key words: Albanian, importance, higher education, women, Kruja.*

## **Tips for Producing Online Systems for Adult Learners**

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### **Abstract**

Technology is transforming faster and faster the way we live, relate, interact and communicate. Smartphones, tablets, notebooks, computers... are tools that can provide and support people to live their lives better, but there are skills and competencies needed to seize all their potential. The European Com ON project seeks to provide a training programme to empower European adults to understand, create and share audiovisual messages and stories. In the first phase of this project, partners had been actively working on the development of the e-Learning course, taking into consideration the results of Intellectual Output and that comprised four modules: Digital narrative; Video creation; Image creation and Illustrations. Since the development of the draft versions of the learning materials finished, it was time to elaborate the subsequent step: the pilot testing and implementation. This phase starts with the preparation of the guidelines for the pilot which was planned to test the Com On products with potential users and to gather their feedback. This pilot phase includes the functionality testing of the e-learning platform, the usability testing. In this article, we describe the activities for this pilot testing undertaken by all consortium partners. All partners select participants and develop piloting training, with at least 25 participants per country. We present this testing stage results with the key findings, conclusions and improvement recommendations. The results presented in this article could be useful to all that are producing an online course to adult learners.

*Key words: adult learners, online course, digital communication.*

## **The Impact of Sport on Youth in the Balkans**

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### **Abstract**

"A healthy mind in a healthy body" is a phrase we often hear, however, it is believed that only 15% of our young people are involved in regular sports activities. Young people need encouragement and awareness, both in schools and in the family, that sport is extremely important in our social life and health. Physical activity is associated with a reduced risk of over 20 diseases, including cardiovascular disease and also reduces stress and depression, even the latter is considered to be the most effective and easiest way to cope, and is the first advice that taken by psychologists for young people with such health problems. Due to the lack of physical activity, another problem, especially in Western cultures, is the overweight of young people, therefore, children who have such predispositions should be encouraged to engage in continuous sports activities as soon as possible. Sport also directly affects physical development, so it is no wonder that about 80% of basketball players are tall. It has also been proven that sports from early childhood, also affects the growth of intelligence and better results in school. Sport, in addition to its health benefits, also helps in social life and the expansion of society, therefore it is especially preferred for the most introverted children because it positively affects the development of communication skills. Sport also teaches the importance of taking responsibility, the role of cooperation (teamwork), admitting guilt, support, and discipline to achieve the set goals of a life-like lesson in general. The basic principles on which the sport is developed are respect and sincerity. Sport teaches double respect, first in respecting the rules, and secondly in respecting the opponent, because even the opposite behaviours are punished. Children tend to follow the example of their idols, so even watching sports to some extent can increase the desire to participate in sports and the lessons of a general moral and sports education.

*Key words: education, sport, tough of western Balkan, nutrition and educational values.*

## **Evaluation of Knowledge, Attitudes and Practices for Covid-19 at the University of Prishtina**

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### **Abstract**

Since the beginning of the pandemic with COVID-19, University of Prishtina (UP) started preparations in response to the recommendations given by public health authorities and other relevant institutions. One of the very first action was assessing the level of knowledge, attitudes and practice (KAP) among student and staff at the UP to take protection and prevention measures and give a contribution to the community. This cross-sectional, for assessing the KAP for COVID-19, was done using an online self-administered questionnaire and included 70 students and 119 teaching and administrative staff. Most of the students and staff were well informed regarding COVID-19. They correctly answered about the symptoms, way of spread and prevention. Above 80% of students and staff were satisfied with the work of the authorities. Above 75% were informed from official web-pages and TV and would like to continue the same way. They declared that they were in time informed from the UP and that they are satisfied with preparations that were done from the UP. The study highlights a good level of knowledge, attitudes and practices among students and staff at the University of Prishtina. We recommend that students and teachers, as well as administrative staff, continue to be informed and aware of this disease, to prevent and detect as earlier as possible any symptom to be helped rather than suffer from consequences and share their information further.

*Key words: knowledge, attitudes, practices, COVID-19, University of Prishtina.*

## **Challenging Relations Between the Personality Traits, Emotional Intelligence, Self-Efficacy and Mental Health of Future Teachers – Case Study**

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### **Abstract**

In this study, we examined relations between Big Five personality traits, emotional intelligence, self-efficacy and mental health of fourth years' students of the faculty of education, considered as issues of much interest for universities and their wider communities. The sample of 162 students (female = 155) with a mean age of 22.33 (SD = 3.25) was gathered from preschool and primary students of Faculty of education at the University of Mitrovica. Demographic information form, Big Five Mini-Markers (Thompson, 2008), Emotional Intelligence Questionnaire Form (Schutte, 1998), Short General Health Questionnaire (GHQ 12) and General Self-Efficacy Scale (Schwarzer, & Jerusalem, 1995) were administered on all participants. Data analysis was done by using SPSS (version-22). Bivariate analysis using Pearson Correlation method indicated that only agreeableness was positively and significantly correlated with emotion perception ( $r=.248$ ,  $p<.001$ ), utilizing emotions ( $r=.163$ ,  $p<.039$ ), and managing others' emotions ( $r=.158$ ,  $p<.04$ ). Agreeableness ( $r=.436$ ,  $p<.004$ ), and neuroticism ( $r=.531$ ,  $p<.003$ ) was also significantly associated with the self-efficacy. All the subscales of emotional intelligence showed positively and significantly correlated with the self-efficacy scale. The emotional intelligence total scale ( $r=.588$ ,  $p<.000$ ) was also significantly associated with the self-efficacy scale. Self-efficacy showed significant correlations with the mental health of preschool students ( $r=.287$ ,  $p<.014$ ). Female students showed higher values for mental health than male students ( $t=1.935$ ,  $p<.037$ ). Future researches are recommended to employ Structural Equation Modeling analysis to determine how these constructs have an impact on future teacher mental health and self-efficacy.

*Key words: personality traits, emotional intelligence, self-efficacy, mental health, future teachers.*

## **The Necessity of Unification of History Programs and Textbooks in Albanian-Speaking Areas**

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### **Abstract**

Nowadays, there is an urgency for the unification and the reforming of history programs and textbooks in terms of content considering the transitional time that Albanian speaking territories are experiencing to provide a more formative and efficient education to Albanian speaking youth. Today is the time to solve this problem seriously through a sincere collaboration of specialists, academics, professors, teachers who cover history programs. Deviations of historical events, deviations of special contributions of historical figures to great events of the Albanian nation are unacceptable. Therefore, the history of Albanians must be written in texts by specialists in the field of history and not historical politics. Endeavouring to achieve this, the way the history is treated should converge in all the Albanian speaking territories in compliance with the demand for the creation of a democratic society as specified and welcomed by the international organizations. The increase in the society's interest shown towards the historical developments with time closely associated with their right to provide their interpretations of the demands of the historical event for the unification of the history programs and textbooks, as well as an increased scientific and methodological level of the preparation of the teachers and an increased scientific and methodological level of the curricula and textbooks as recognized across the nation. The university programs should undergo unification by paying due respect to and establishing rightful connections and relations with the alternative interpretations, critical thinking and the future patriotic and contemporary formation of the generations to come. The research aims at promoting and establishing nationwide cooperation for designing unified university textbooks and programs for all the Albanian speaking territories.

*Key words: program, unification, interpretation, critical thinking, history, contemporary.*

## **Tailoring Linguistic Material to ESP Students' Practical Needs**

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### **Abstract**

The article is an attempt to create an optimal content of an English course for nursing purposes after the reflection on the motivation survey results. The course is dedicated to a particular and defined group of nursing students studying at University of Applied Sciences in Tarnów, Poland. The paper addresses the issue of choosing job-related topics, useful functional phrases, vocabulary and terminology to prepare a nursing student for a demanding labour market in the health care environment. The selection of linguistic material was carried out based on fruitful cooperation between the representatives of the following groups: Polish teachers of English, Polish nursing professionals, nursing students and nursing practitioners. As a result, the specific topics, functional phrases as well as examples of new, “missing” phrases and vocabulary were presented for the academic year 2020/2021.

*Key words: ESP course, nursing students, linguistic material.*

## **Concepts of Pragmatics in High Schools' Study Material for the Albanian Language**

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### **Abstract**

The curricula with competences for pre-university education in the Republic of Albania offers the right opportunity for the optimal achievement in linguistic communication. For this reason, it impacts even on the interpretation related to discursive practices or the new directions that the applied linguistics establishes for linguistic thinking. Pragma linguistics as a science of discursive movement is one of the core principles of the Albanian language's education program. Having a fully research and epistemological aim, our work is founded on proper theoretical and practical analysis related to the applied directions. The study material for the Albanian language and literature, in the middle-high education and especially in high school should follow these directions. The subject of this work is the student's material in high school in coherence with the programs, as well as the content of the State Maturity's exams. The theoretical start of this approach is the ultimate arrivals in the field of applied linguistics along with the developing pragmatic's scientific concepts. In the opportunities given by this work, we aim to achieve: the tracking of pragmatic treatments in the linguistic analysis of the Albanian language's materials in high school as well as in the State Maturity's exams; the evaluation of the findings, according to the principle of epistemological vigilance; the marking of the conclusions related to the righteousness of the scientific knowledge transfer in the school study material.

*Key words: curricula, applied linguistics, discourse, pragmatics.*



## **The Impact of COVID-19 and Natural Disaster - Earthquake on the Learning Process for Students of Shijak City**

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### **Abstract**

COVID-19 brought the closure of schools around the world. An estimated 1.2 billion children globally attended school from their homes. This virus brought about dramatic changes in the forms of teaching and learning, forms which were realized through digital platforms and distance learning. Also, on the other hand, the city of Shijak was one of the areas affected by the earthquakes of September 21 and November 26, 2019. The arrival of a new virus and the earthquakes that occurred one after the other in the city of Shijak brought impacts on the learning process. This study aims to assess the effects of COVID-19 and natural disaster such as the earthquake in the learning process for students in the city of Shijak. It turned out that some believe that unplanned and rapid movement to learn online - without training, and little preparation - will result in a poor student experience, which is unbeatable for sustainable growth, others believe that a new hybrid model of education will emerge, with significant benefits. It also turned out that some students did not have the right technological skills. Therefore, it is necessary to study the advantages and disadvantages of distance learning. Also, on the other hand, such natural disasters emphasize that investment should be made in the well-being of individuals, especially long-term psycho-social recovery, including community development programs and support for areas such as education, health and employment. If online learning technology can play a role now, it is everyone's job to explore the full potential of its use globally.

*Key words: COVID-19, earthquake, online learning, teachers, students.*

## **The Role of Basic Terms in the Terminology of Theoretical Mechanics in Albanian Language in Approach to English**

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### **Abstract**

The base terms of this terminology have been viewed from the level of both languages, like in the Albanian language as well as in the English language, taken one by one, as well as compared with one another. It is important to emphasize that the English language has been seen with precedence as a language with an international extend, whereas the terminology of Mechanics in it as a special vocabulary that serves as a standardization sample not only for the Albanian language but for other languages as well. The reliance on the base terms of the field of Mechanics, as well as on the illustrated terminological material, taken from two base technical subfields for the terminology of both languages, as are Theory of Mechanics (TM) and Applied Mechanics (AM), has enabled to extract a range of common sides in both languages (like the connection of this terminology with the vocabulary of the general language, like dhëmb (tooth), zinxhir (chain), kokë (head), the same structures, similar or different term creating on the word or word group level: nëngarkesë (undercharging), bilancier (rocker), bjellë (connecting rod) etc.

*Key words: basic terms, theoretical mechanics, Albanian language, English language, approach of two languages.*

## **Education Amid the Covid-19 Pandemic and the Issues Faced by Developing Countries**

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### **Abstract**

The pandemic situation interrupted the education of 1.2 billion students worldwide and about 150 countries closed down schools. In these times, the economy should not receive the main focus but education does also because “Education cannot wait.” The pandemic situation caught the Albanian educational institutions unprepared, therefore the ministry of education responded to the crisis by drafting guidelines to facilitate online learning. However, is that enough? The purpose of this study is to identify the issue through the whole percentage of children who have developed online learning and to present the difficulties faced by parents and children. The research methodology is a combination of children's, parents' and teachers' interviewing alongside observation of participation in online learning. The main issue being faced is the fact that Albania is far off from the countries of the European Union in terms of online infrastructure facilitation, meaning that not every family has the opportunity to use a computer and cellphone. Also, children with disabilities have difficulty learning online. Meanwhile, not all teachers are trained for this type of teaching. Accordingly, some proposals are suggested, that are mainly related to investments and measures which can be applied by governmental institutions.

*Key words: education, pandemic situation, learning online.*

## **Theaching with Competences of Biology and Chemistry**

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### **Abstract**

The education process is an activity that requires the interaction between the teacher and the students. During these activities, one of them is the leader and the other interacts, being led by the former. Therefore, it is important to emphasize the main factors of the teaching and learning processes, the teacher and the student. The underestimation of one of them would significantly impair the educative process. This study aims to identify the importance of explaining with competences of Biology and Chemistry subjects at the sixth-grade students. Therefore, it takes into consideration the teaching process with the student in the centre of it, based on seven competencies. The teacher, who is the leader of the process, has an important role. The information that is shared to the students must be related to other fields, must be clear, precise and motivating. The student must research by his own and also get extra information to deepen his knowledge taken in class. The school curricula are the bases of the entire lesson procedure in Albania, but also a tool for reaching the objectives of education and learning, which are so dynamic and developed according to social and economic demand. The curricula are subject to continuous changes according to the latest education trends. Learning with competences develops the social and affective skills of the students, but also aims at increasing the student's skills to incorporate the theoretical knowledge in practical activities. The main instrument used in this study is the questionnaire for the teachers and the students. The results of the questionnaire prove the study hypothesis

*Key words: education, methodology, competences, curricula.*

## **Methodical Model for Training in Sustainable Waste Management: Life Cycle of Waste in the Environment**

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### **Abstract**

Virtually every resident, organization and human activity generates some type of waste. The amount of waste produced is influenced by economic activity, consumption, and population growth. Once generated, wastes must be managed through reuse, recycling, storage, treatment, and/or disposal. However, each of us has witnessed huge amounts of waste in the ocean, on the beach, in the soil, and so on. Training in sustainable waste management should start at an earlier age aiming to develop the idea of the integrity of man and nature. Aim of the present study is to develop, construct and validate a methodical model for training scholars and students in sustainable waste management to enhance their pro-ecological behaviour. Here we demonstrate one of the themes entitled "Life cycle of waste in the environment" (for 10-12 years old scholars). By the active learning and activity approach, all scholars understand the key importance of each person in maintaining ecological balance. They significantly reduced the amount of daily generated waste ( $p < 0.05$ ), especially disposable plastics, and the majority became motivated to collect separately domestic waste. Training course effectively contributes to the formation of sustainable environmentally friendly behaviour, personal attitude and social commitment to the protection of the planet.

*Key words: pro-ecological behaviour, sustainable management, education, active learning, activity approach.*

## **Role of Agenda 2030 for Sustainable Development in the Academic Training of Biology Teachers: The Bulgarian Context**

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### **Abstract**

This study aims to offer some possibilities for realizing the objectives of Agenda 2030 for sustainable development in the training course of biology teachers at the university and to support them by empirical data. Highlights: i) Identifying the relationships between the goals of Agenda 2030 and the goals of higher education; ii) Identifying the possibilities for integration of the Agenda 2030 goals in the universities curriculum; iii) interdisciplinarity is one of the main approaches of Education for sustainable development (ESD) in the training of biology teachers; iv) Enhancing the formation of competencies in sustainable development based on empirical data. Main results of the present study are as follows: 1) Enriched opportunities for university education through integrative curriculum models including the goals of Agenda 2030; 2) Approbated curriculum with elements of the ESD; 3) Some possibilities offered for developing competencies for SD in students – future teachers of biology; 4) Some empirical data for the effectiveness of proposed curriculum and their effect to fundamental changes in the results achieved by the student in the training course of biology teachers.

*Key words: education for sustainable development, higher education, curriculum, Agenda 2030 for sustainable development.*

## **Innovative Educational Content for the Purpose of Youth Employment**

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### **Abstract**

Education is the basis of human life and development. General education meets the needs of each individual and refers to the acquisition of broader knowledge in various scientific fields. While vocational education meets professional human needs. Through it, training is performed for professional activity, the transition from that activity to another, further training in the profession, etc. Since education is one of the most important tasks of any society, school systems must be at the service of young people so that they can use their intellectual, work and life needs in all their dimensions. Innovative changes in society impose a redefining of the goals and tasks of educational systems. With the existing demographic problem and the tendency of young people to leave the country, a new problem appears in society, employers have problems with the labour force. The economic and social transition has completely changed the economic structure, but almost nothing has changed in the education system, with the greatest resistance to change being shown by secondary vocational schools. This paper demonstrates the need to modernize continuing education in secondary vocational schools and to introduce current educational profiles to respond to labour market needs.

*Key words: education, innovation, educational profiles, employment, labour market.*

## **2. Science and Research**

- Innovative Technologies and Propositions, Good Practices
- Environment
- Chemical Engineering and Technology
- Natural Sciences (Chemistry, Biology, Physics, Math, Geography)
- Health
- Agriculture
- Mechanical Engineering
- Materials
- Metallurgy
- Law and Social Sciences (Sociology, Anthropology, Archaeology, Politics, Philosophy, Interactive bioethics)



## **Political and Social Aspects of Polarization Processes in Modern American Society**

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### **Abstract**

The primary objective of this article is to explore current social and political aspects of polarization in American society. The influence of ideological imperatives is reflected in hostile attitudes towards political opponents and prevents the forming of adequate self-identification in current political environment simultaneously changing demographic, geographic and racial characteristics of society while provoking a culture of contempt and lack of political debate. Reflecting on the characteristics of social polarization, the study examines their impact on the present-day political environment in the United States of America. Party sorting is viewed in the context of strengthened partisan identity that leads to increasing bias, social division, and political alignment.

*Key words: social polarization, bias, political identity, party partisanship, the culture of contempt.*

## **Antioxidant Activity of Calendula Officinalis (L.) Extracts Growing in Kosovo**

Arben Haziri, Arben Mehmeti, Sevdije Govori, Hamide Ibrahim, Ariana Kameri, Miranda Stavileci, Rozafa Koliqi, Fatmir Faiku

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### **Abstract**

In this research, the antioxidant capacities of five different extracts (diethyl ether, chloroform, ethyl acetate, n-butanol and water) of *Calendula officinalis* (L.) growing wild in Kosovo were analyzed. Antioxidant activity was determined by DPPH assay. Statistical analysis was performed using SPSS version 13.0 and Excel 2010. Ethyl acetate (EtOAc) and water (H<sub>2</sub>O) extracts of *C. officinalis* (L.) expressed very strong scavenger activity, 15.13 µg/mL and 15.20 µg/mL, respectively. The observed differences in antioxidant activity could be partially explained by the levels of phenolics and flavonoids in extracts of *C. officinalis* (L.). This plant can be used to discover bioactive natural products that may serve as leads in the development of new compounds or additives for application in pharmacy or food technology.

*Key words: extracts, antioxidant, calendula officinalis (L.), Kosovo.*

## **Recovery of Phosphorus and Sustainability: Could Poultry Litter Ash be Considered a Viable Option?**

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### **Abstract**

Phosphate rock production (included in the “List of critical raw materials for the EU”) is abundant but finite, and controlled by few countries (Morocco and Western Sahara controlling over than 70% of the reserves). The opportunity for the recovery of phosphorus (P) - reducing waste, energy consumption and environmental damage - is being implemented due to public awareness and new policies reflected in the European Union legislation (“Circular Economy package”, “Zero Waste”, new rules on organic and waste-based fertilizers, considering phosphate rock a critical raw material, risks of trace elements in agroecosystems). In particular, poultry litter, the P-richest manure, is incinerated generating ash that is mostly landfilled despite being P-rich material (composed of minerals and glass-like an unconsolidated phosphate rock). Hereby, the main idea is that it will be possible to make poultry litter ash a substitute for phosphate rocks if an optimized product is made by an interdisciplinary approach which includes knowledge from mining engineering, geology, chemistry, chemical engineering, metallurgy, materials science, and environmental science. The optimization process passes through a key step: the characterization of poultry litter ash in terms of basic and advanced techniques (e.g. X-Ray Diffraction, Scanning Electron Microscopy with Energy Dispersive X-Ray spectrometry, Total reflection X-Ray Fluorescence, Micro-Raman spectroscopy). The results obtained will be used to understand the P partitioning and materials formed, and provide the information to optimize the product and its applications. From this perspective, the use of poultry litter ash as a substitute material of critical raw material is an essential part of increasing resource efficiency and closing the loop in a circular economy once it will contribute to turn one industry’s by-product into another industry’s raw material improving EU competitiveness through the development of industrial technologies resulting in the reinforcement of technological knowledge, specialized skills development and jobs, and pushing EU to the forefront in the recovery of P.

*Key words: phosphorus, critical raw material, poultry litter ash, recovery, characterization.*

## **Determination and Comparison of Heavy Metals in Petroleum Products and their Environmental Impact**

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### **Abstract**

Coke oil, diesel, and gasoline are by-products of oil production technology. Coke is a very important by-product of the secondary processing of petroleum ėastes. Raė crude oils belong to the relatively asphalt-resin heavy oil group, and crude oil coke, in the overall crude oil processing balance, takes an important part, about 19%. Due to its high energetic potential (above 8,000 kcal/kg), compared to all combustible fossil fuels, coke oil has found widespread use in various fields of industrial processes. Regardless of the benefits, as the ultimate byproduct of technological processing of crude oils, this product serves as a deposit of heavy metals and other chemicals. Diesel and Gasoline are also liquid crude oil derivatives. Even despite their physical condition, they have in their content-heavy metals with a very negative impact on the environment. The material also provides an economic estimate on the cost of monitoring and impact on the economy of heavy metal metals, affecting the quality of combustible material. The heavy metals analyzed in the samples were: Vanadium (V), Nickel (Ni), Lead (Pb), Iron (Fe) and Calcium (Ca). The determination of these metals was carried out with X-ray fluorescence spectrophotometer. A highly effective method for the determination of these metals in both liquid and solid samples.

*Key words: heavy metals, environmental pollution, oil coke, gasoline, diesel, X-ray fluorescence, cost.*

## **Prediction of Water Pollution Level Using Acute Toxicological Tests**

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### **Abstract**

There is a wide range of pollutants that alter the natural water parameters. Ecotoxicological studies use living organisms to predict the effects of different chemicals in various environments, including water systems. *Daphnia* sp. is one of the organisms used to foresee the possible impact of the chemicals in water bodies. This study takes into consideration the acute and chronic tests using *Daphnia* sp, as an indicator of possible effects in the water of different chemicals. These organisms, which are natural inhabitants of water systems, are raised in laboratory conditions following their natural habitat. Different chemicals in various concentrations are used to test *Daphnia* behaviour and mortality. These tests are performed according to OECD standards. The laboratory data are then elaborated to determine the highest concentration of the chemicals that shows the highest mortality of the organisms, as well as the lowest concentration with no effect in the population. Experiments show that *Daphnia* organisms exhibit various behaviours in different chemical concentrations.

*Key words: ecotoxicology, Daphnia sp., chemical concentration, mortality, acute tests.*

## **Covid-19 and Quarantine: Indicators of Domestic Violence in Kosovo**

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### **Abstract**

Kosovo, like many other countries in the world, has faced a serious public health situation as a result of COVID-19. During this time, Kosovar society has been quarantined to protect itself from the spread of Covid-19. Putting the society in quarantine has a positive effect on stopping the spread of COVID-19, however, it had a negative impact on the increase of cases of domestic violence in Kosovo society. This study aims to show the extent of violence and the causes of domestic violence in Kosovo society. The study confirms two hypotheses: H1: Domestic violence in Kosovo has increased (18.02%) in pandemic times (Covid-19) compared to last year and, H2: Increased stress (18.9%), socio-economic insecurity (11.4%) and lack of physical space in house/apartment (4.4%) lead to conflicts and domestic violence.

*Key words: COVID-19, violence, family, causes, Kosovo.*

## **Transport Corridors and “Tunnel Effect” that Might Evoke**

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### **Abstract**

Nowadays, during the research and tendencies for further infrastructural developments, to quickly cover a distance from one point to another, the roads have turned into tunnels. This phenomenon is present today in all modes of transport which isolates us from current actuality and contact with the other part. This is often true in the case of transport by train or plane. Road infrastructure which creates its passage corridors and the connection of two or more inhabited centres with different population numbers creates nodes where it interacts with other traffic networks and in these cases, such tunnel effects are used to exclude and bypass most of the intervening spaces, in this way they are avoided to access in a faster time two distances. While transport and transit corridors have become more common as reference points for urban planning, corridor development has emerged as a more interesting and complex issue in transport planning. The problems of corridor development are always great and they need to provide access to transport, quality transport, develop habitable communities and ensure economic development along the corridor. In case a corridor crosses the jurisdictional boundaries then these problems worsen. There is a need for a model that addresses key problems in corridor planning and management. This paper develops such a model which is based on the 5 main areas of the corridor development process: governance, economic impacts, financing, design and citizens' preferences. For the basis of this analysis is taken a case study which is "The road of the Nation" in Albania. Finally, the lessons learned from implementing the model are presented.

*Key words: tunnel effect, corridor, transport, residents, social-economic impacts.*

## **Analysis of the Impact of Sodium Hypochlorite on the River Ibar During the Covid-19 Pandemic**

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### **Abstract**

The situation caused by Covid-19 pandemic has caused an impact on the environment, due to the limited human activities, and actions against Covid-19 spread. In this paper, there will be presented the results of the experimental investigation of using sodium hypochlorite for disinfection purposes to the river Ibar water quality and aquatic organisms. The city streets and buildings were disinfected daily, and the wastewaters were collected into stormwater pipelines, directed to the sewerage and discharged into the river. There is no wastewater treatment facility involved, and the domestic sewage was mixed with the stormwater flow, entering the river at the same discharge point. For a better understanding of this impact, the results from the physical, chemical and microbiological testing of the river water quality were compared to the pre-Covid time. The results have shown that the river is III class of water, and the values for Nitrate, Nitrite and BOD were exceeding the values for the III class. The concentration of 0.1% of NaOCl is sufficient to eliminate *Proteus mirabilis*, *Proteus vulgaris*, *Pseudomonas aeruginosa* during the exposure time of 5 min. Since these microorganisms, which are often found in surface waters and are sensitive on low concentrations of disinfectants, were not isolated in the sample analysis, this can be contributed to sodium hypochlorite. As the river Ibar is the natural recipient of all wastewater from the north part of this region, it is necessary to continuously monitor water quality and implement protection measures, in anticipation of the wastewater treatment plant construction.

*Key words: physical-chemical parameters, microbiological parameters, sodium hypochlorite, pollution, the river Ibar analysis.*



## **Biomass as a Resource of Green Energy Production**

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### **Abstract**

The business ambitions of multinational companies, but also of local entrepreneurs, aimed at making a profit, as well as the irresponsible behaviour of the entire society, are only several of the causes of deterioration of the living environment. Irresponsible behaviour leads to a high level of environmental pollution which is therefore reflected in many aspects of human life. Namely, the use of technologies and materials harmful to human health and the environment leaves traces on the condition and quality of life of present and future generations. Establishing rules for the survival of the planet and improvement of the quality of life of all of us who live on it implies a moral obligation on the part of companies to use technologies that will not pollute the environment. To solve the problems of industrial pollution, innovative technologies that pollute less are sought, through the use of better quality raw materials, through the use of renewable energy sources as alternatives and conditions for healthy and sustainable development. It is necessary to establish a balance in the realization of economic goals with respect for the rules of environmental production, through the preservation biodiversity and the use of natural resources as energy sources rationally and sustainably. For that cause, in addition to solar, wind and water energy, biomass is becoming increasingly important in agricultural production, but also as a resource of heat and electricity. The use of biomass as a resource has its ecological advantage over fossil fuels, precisely because of the renewable and reduced concentration of carbon dioxide in the atmosphere, but all this requires government assistance through series of incentives, population education and finances.

*Key words: biomass, renewable energy sources, sustainable development, green energy.*

## **Identifying Factors that Influence Work-Related Activity of Individuals over 55 Years**

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### **Abstract**

Active ageing has mainly been examined through cross-sectional research, examining determinants that affect positively or negatively active ageing. This study aimed to see active ageing from a cohort perspective and focused on exploring potential factors and themes that influence work activity of individuals over 55 in a socio-economic context of a developing country, with a relatively young population, using qualitative data collected through semi-structured interviews from a cross-occupational sample of 15 older people aged 55+ (age average of 59.8 years) in Kosovo. Thematic analysis suggests that there are individual, social, and work-related factors that have a positive and negative impact on the work of older people. Opportunity to remain engaged continuously, maintaining the social network, gaining work respect, work-related motivational approaches, and the possibility to learn were identified as positive themes. Whilst, negative aspects related to work-related stress, work-related pressure, lack of appropriate working means and conditions, health problems, and difficulties in using technology. Study implications relate to developing and changing work practices and organizational ergonomics to better match the needs of older employees. Future research plans are to continue with another way of cohort qualitative data to investigate possible changing patterns of and possible influential factors.

*Key words: ageing, work performance, cohort data, thematic analysis.*

## **How to Understand the Rapid Spread of SARS-Cov-2 Infections and the Outbreak of Covid-19: What Can We Learn from Spatial and Medical-Geographical Perspectives – The Cases of Italy, Austria, Slovenia, and Croatia**

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### **Abstract**

For some time now, the public debate is heightening in connection with the proclamation of very restrictive measures, followed by further austerity in the field of free movement, physical contacts restrictions and quarantine. However, according to most epidemiologists, these measures are essential to slow down the spread of the infection (i.e. to flatten down the curve) and thus gradually reduce the number of patients in need of intensive care for a longer period due to a more difficult progression of the disease. In addition to hospitals, care- and nursing homes, along with their staff, are at the most risk of spreading the infection. This is widely confirmed by the acquired data from Italy, Austria, Slovenia, and Croatia. However, there are significant spatial, micro-regional, and age-specific disparities in the uptake of the disease. The article seeks to explore the main differences in the mortality to age-specific ratios impacting the death toll of the disease across the four countries, along with the regional disparities, and the general national pathways in dealing with the epidemics. Applying the combined analysis of statistical and demographic indicators, the contribution sheds new light on the systemic restrictions on the population travelling abroad, elderly in nursing homes, youngsters in schools and kindergartens, and patients in hospitals. The quadruple comparison reveals the ways employed in restricting the spread of infection and the most vulnerable groups affected as well as it calls for a systematically interdisciplinary research approach.

*Key words: CoViD-19, SARS-CoV-2, comparative analysis, interdisciplinary research, mortality rates, ageism.*

## **European Union and Competition Law: Is it Stopping Innovation in the Era of New Economy?**

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### **Abstract**

A healthy competitive market should motivate business to deliver their best products to the consumers. The relationship between businesses among themselves and consumers is regulated by competition law, especially when it concerns protecting fair competition, consumer rights and fostering innovation. Google as one of the most important market players in the digitization and innovation of services offers several products, which in turn are an absolute choice for numerous consumers. However, in the cases EU Commission vs. Google it is understood that the company has abused its dominant position and has breached treaty law. On the other hand, Google appeals the decision of the Commission, regarding the Google Search (Shopping)) Case AT.39740 on grounds that there are no clear legal and economic arguments for the company to be at fault and to bear the amount of the tremendous fine. The case of the European Commission against Google for the online advertisement space is an example of how anti-trust regulation can protect competition and ensure that the customer gets the best product. Tackling giants like Google can have other impacts on the market and while it restricts Google in the market, it does not necessarily foster business innovation. Google as a search engine has an undisputed place in the market as a giant in the digital economy and e-commerce. However, this company is not the only search engine in the market and the choice of which one to use rests solely with each consumer.

*Key words: New Economy, anti-trust, competition law, legal battle, digitization.*

## **Assessment of Thermal Water Quality in the Elbasan Area**

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### **Abstract**

Elbasan's thermal waters are a great asset of the village of Tregan, as most of the people's income comes from the use of these waters in balneological centres built mainly privately by residents of the nearby area. After the 1990s there was chaos and unplanned constructions and a disrespect to the minimal rules of environmental protection and thermal springs. Thermal waters, in general, are very important in the development of the area in curative, economic and social terms. This research aimed to evaluate the role of natural and mineral resources in health, environment and recreation, tourism, etc. Also, the quality and characteristics of thermal waters have been assessed, referring to the indicators used for irrigation water use, according to national and international standards. The area studied is Elbasan area. In this area, sampling sources for the collection of thermal water samples were obtained, allowing for analysis of physical-chemical parameters and comparing the results found. The results of the analysis showed that the average temperature value in two sources of thermal water is up to 58.3 °C, which is very high for the flora and fauna where these waters are discharged. Estimated values of H<sub>2</sub>S, CO, sulphates, calcium, nitrates, magnesium and phosphates are statistically significantly different in sampling. These resources are apparent for very high levels of parameters as seen in the conducted analyzes but compared to the first avg-in-1995 analysis of the values in the two supply sources that we have reduced to their content for the period April 2019. The effect on the biological environment can be divided into two parts, the effect on flora and the effect on fauna.

*Key words: thermal water, Elbasan area, physicochemical parameters, sulfate, curative values.*

## **Forest and Wildlife Law Enforcement in Kosovo**

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### **Abstract**

Kosovo forest sector, with coverage of 44 % of the total Kosovo territory, can provide many benefits to the Kosovo population. These benefits can be estimated to be around 4% of GDP. Estimations also show that Kosovo Forestry Sector can annually generate from 20 to 40 million Euros per year, which includes the contribution of around 10% in the total employment. Considerable forestry coverage, rich forestry composition, climate, hydrology, soil and other circumstances, provide favourable conditions for plant diversity, and growth of the huge number of different species of fauna in a relatively small area. There exist around 46 big mammal species in Kosovo, some of them with regional and global conservation importance, including a high number of small mammals and birds. To preserve and protect the natural values, relevant institutions of Kosovo have promulgated management and organizational structure, and have developed numerous strategies, programs, laws and other administrative instructions. However, the establishment of administrative and management structure, policies, programs and legal framework, has not yet succeeded to overcome different interferences and influences of more institutional authority's "struggle for power". The adopted legal framework has not yet been very satisfying, because the guidelines are primarily focused on the nature management, neglecting the demands and interests of the local population and communities residing in the mountains, and the surrounding areas. The struggle to get more power and responsibilities has resulted in non-competent administrative and management structures, lack of qualified and competent staff, and other weaknesses and problems inherited by the past implementation of the co-management system. Based on the findings and analysis the study aims to contribute to the path toward compliance of administrative and management structures, policies and regulatory framework throughout the promotion of the "participatory approach" system, respecting the traditional indigenous knowledge and good practices in the management of forest and wildlife resources.

*Key words: forest, wildlife, employment, stakeholders, policies.*

## **Effects of Metal Toxicity on Growth and Pigment Contents of *Salix Purpurea* in Mitrovica, Kosovo**

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### **Abstract**

In Mitrovica-Kosovo, the mining activity is threatening the environment and living organisms. The first source of this pollution is the existence of open tailing dams in the city of Mitrovica and the contamination of soil, air and plants. This study determines heavy metals contamination levels evaluated by *salix purpurea* grown in the city of Mitrovica and the surrounding area of Mitrovica Industrial plants where the open tailing dams of the mining processing are located. *Salix purpurea* is used as biomonitoring of soil pollution that comes as results of leaching of heavy metals from tailing dams. The heavy metals (As, Cd, Co, Cr, Cu, Ni, Pb, and Zn) were chosen for their toxic effects on the floral specie of *salix purpurea*. Further, the photosynthetic activity of the plant was used to assess the content of heavy metals. Two years period (2018 and 2019) study showed heavy metal upgrade in leaves and chlorophyll. Total chlorophyll, ratios of chlorophyll a over chlorophyll b, and total chlorophyll over carotenoids were calculated. The obtained data were analyzed using Minitab 19 statistical software. The results indicated that mining activities and the open tailing dams initiate heavy metals pollution for plants with a high risk of accumulation.

*Key words: heavy metals, salix purpurea, photosynthetic activity.*

## **Evaluation of the Bioavailability, Translocation and Enrichment of Selected Heavy Metals by *Salix Purpurea* Growing in Mitrovica Mining Region, Kosovo**

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### **Abstract**

Human activities such as metals mining and processing operations provide one of the most important sources of contamination in the environment. This study aimed to assess the total concentration of potentially toxic metals (As, Cd, Co, Cr, Cu, Ni, Pb, and Zn) in the soil and plant samples of *Salix purpurea* collected from Mitrovica mining region, Kosovo. Results demonstrate that metal concentrations in soils are in general above the Kosovo average limits. The bioaccumulation, translocation and enrichment factors were used to examine uptake and accumulation patterns of selected metals. Two years period study showed heavy metals uptake in roots, leaves and stems from the mining dumps and surrounding areas of the in Mitrovica Industrial Park. Observed interactions affect the uptake of metals by *salix purpurea* as well as the degree of accumulation was presented using the Minitab 19 Statistical Software and the statistical analysis of response surface plots concentration characteristics, correlation matrix and principal components analysis. The results indicate that there is an increasing need for further research mainly focused on the mechanisms of remediation whereby the *Salix purpurea* can survive in mining areas and contaminated soils.

*Key words: heavy metals, environmental assessment, bioaccumulation, translocation and enrichment factors.*



## **The Relationship Between the Position of Residential Facilities and High Voltage of Electricity as a Cause of Different Diseases**

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### **Abstract**

Although Kosovo is a small country, it still has the potential to generate and distribute electricity. This distribution is realized through high voltage lines 110, 220 and 400 kV. During this distribution, radiation is released, which can occasionally be detrimental to the lives of people living in the presence of high voltage lines. It is assumed that this type of radiation can lead to cell membrane dysfunction, DNA damage, brain tumour, cardiovascular disease, diabetes, anxiety, stress, and others. This research aims to study the interconnection of residential buildings and high voltage electricity (110, 220 and 400 kV) as causes of various diseases. To obtain convincing results, we performed measurements of high voltage radiation and noise, in three locations and 4 areas. From the results of the radiation measurements, we proved that a value of electric induction is higher than the allowed limit and all other values are below the limit of the standards compiled by the International Commission for Protection against Non-Ionizing Radiation. The noise measurement values in dB have all turned out to be much higher than the permitted limits according to the standards set by KOSTT, thus increasing the degree of risk for residents living near high voltage lines. So, in general, we can conclude that the level of radiation released by EFM in Kosovo is low and residents have a safe environment in terms of connectivity with EFM.

*Key words: radiation, disease, high voltage lines, measurements, settlements.*

## **Support Systems for Dairy Production as a Factor of Regional Development**

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### **Abstract**

From the aspect of the international economy, milk is an important strategic product for every country. Taking into account the mentioned statement, but also the natural potentials of the North Kosovo (specific relief, favourable climate, good altitude), the production of milk and dairy products is one of the strategic goals of this region. Precisely because of that, the goal of the research is potential support systems for milk production. Namely, investments in livestock are not small at all, and the purchases itself, as well as milk prices, are often called into question. The authors of this paper intend to point out possible ways to improve the production of this sector (from legislation to other types of support of state institutions to this sector of production). Summarized research results indicate that investing in this type of agricultural production represents the development potential of North Kosovo as well as the entire region, on the other hand, the conclusion indicates that this sector represents a great opportunity to employ a large number of residents, from unskilled workers to agricultural and food technicians, agricultural engineers and technologists. Besides, the development of this sector brings many other benefits: it stops the migration of the population from the countryside to the city; prevents the outflow of young people from the North region; ensures the stability of the supply of milk and dairy products in the wider market, and most importantly, the multiplier effect of the dairy construction on other production and service sectors of the economy, thus ensuring the development of the entire region.

*Key words: local population, motivation systems, regional development, legal regulations.*

## **Determination and Statistical Analysis of the Presence of Elements in Soil, Honey, and Pollen in the Region of Mitrovica, Kosovo**

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### **Abstract**

The study aimed to investigate the quality of the honey in Kosovo, the selected elements in the soil and pollen, and whether multivariate methods can provide the possible source confirmation of environmental contaminants. The pollution indices such as contamination factor (CF), degree of contamination (Cd), modified degree of contamination (mCd), pollution load index (PLI) and geo accumulation index (Igeo) were performed in this study as a diagnostic tool for environmental pollution. Sixteen samples were taken at the following depths of 0-5 cm and 20-30 cm in the region of Mitrovica, Kosovo. The concentration of elements in the samples was analysed by ICP-AES and ICP-MS. The study revealed moderately to strongly pollution levels of Pb, Zn, As, and Cd. High average contents were observed for Pb, Zn and As, therefore, the arsenic average content was also higher in topsoil (0-5 cm) following bottom soil (20-30 cm), indicating anthropogenic origin.

The study revealed moderately to strongly pollution levels of Pb, Ni and Al, while Cluster analysis illustrated interconnection between the contaminants and the sites with major pollution at selected sites.

*Key words: Kosovo, honey, pollen, soil, multivariate analysis, ICP–AES, ICP–MS.*

**Bioproduction of New Volatile and Flavor Compounds by  
Biotransformation of Genetically Modified Hairy Roots of *Hypericum  
Perforatum* (L.) with *Bjerkardera Adusta***

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**Abstract**

Basidiomycetes are well known for their ability in the production of new volatile and flavour compounds during fermentation processes. *Bjerkardera adusta* (BAD) was grown in solid and liquid media using hairy roots of genetically modified *Hypericum perforatum* (L.) as the only source of carbon and nitrogen. After the first screening by GC-MS/MS-O we have seen that BAD can produce some interesting compounds, including flavor ones. In total twelve new volatile compounds were produced, from which eight were identified (3-Octanone; 2-Octenal (E); Benzene-1,3-dichloro-2-methoxy; 2,4-Decadienal; 3-Chloro-4-methoxybenzaldehyde; Benzaldehyde-3,4-dimethoxy; Furan-2-pentyl; Octanal; 1-Octen-3-ol) and the others were marked as no identified. During measurements, all compounds were perceived at the ODP port for detection of their aroma. Compounds were identified by comparison of Kovats Indices (KI) and mass spectra to those of authentic reference compounds on polar VF-WAXms column using headspace solid-phase microextraction-gas chromatography-mass spectrometry (HS-SPME-GC-MS)

*Key words: basidiomycetes, volatile compounds, hairy roots, Hypericum perforatum* (L.), *Bjerkardera adusta*.

## **Novel Applications of Piezoelectric Materials in Aerospace Engineering**

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### **Abstract**

Aerospace materials are materials used in aeronautical engineering and also spacecraft engineering. These materials require exceptionally high and flawless performance, often high strength and fatigue resistance, heat resistance, reliability and durability, while the cost is often not a limiting factor. The most widely used materials in aerospace are alloys and composites. Many modern alloys (aluminium, titanium, nickel alloys and steels) are being developed and improved to accommodate increased requirements of modern aerospace vehicles. Besides, carbon fibre composite materials are commonly used nowadays in manufacturing different aerospace components. On the other hand, it is less known that many novel and advanced ceramic materials find also their applications in aerospace engineering. Piezoelectric effect converts the deformation in electrical energy or vice-versa. The research for piezoelectric materials in the aeronautical field is promising, even though the aeronautical industry gives preference to more tested materials, in which failures are well-known. This paper presents the modern applications of piezoelectric ceramics in aerospace for the damage detection in laminated composite materials, controlling the shape of composite material parts and for the possible development of piezoelectric wind turbine blades, which would bend when hit by wind. The experimental applications nowadays mostly include drones and non-conventional energy projects. The outlook of these technologies in commercial passenger aircraft is expected within the next decade.

*Key words: ceramics, piezoelectric, aerospace, aeronautics.*

## **Materials Selection for Electric Kettle Through Product Design Approach**

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### **Abstract**

Material selection is the central point in engineering design. Different product requirements have to be carefully analysed and identified by the product designer. Next, comprehensive required material properties have to be defined. For the proposed materials and designs, a comparison of advantages and disadvantages has to be made. The most important are functional requirements, such as mechanical and chemical properties. Manufacturing possibilities and constraints can be also challenging for the designer. Environmental considerations for the selected materials and processes are increasingly being highlighted and must be taken into consideration. Last but not least, the cost of the selection of the proposed material in a novel product design often makes the final decision. This paper presents the analysis of the operating conditions, product property requirements and relevant material properties in the design of the hot water kettle typically used for preparing tea and coffee. Borosilicate glass, ceramics, stainless steel and polypropylene plastics for producing the housing of the water kettle are proposed and compared.

*Key words: material selection, product design, electric kettle.*

## **Design Modern Distributed Systems Based on Microservices Architecture**

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### **Abstract**

Distributed systems are very commonplace nowadays. They have seen enormous growth in use during the past few years. The idea to design systems that are robust, scalable, reliable, secure and fault tolerance are some of the many reasons for this development and growth. Distributed systems provide a shift from traditional ways of building systems where the whole system is concentrated in a single and indivisible unit. The latest architectural changes are progressing toward what is known as microservices. The monolithic systems, which can be considered as ancestors of microservices, cannot fulfil the requirements of today's big and complex applications. In this paper, we decompose a monolithic application into microservices using three different architectural patterns and draw comparisons between the two architectural styles using detailed metrics that are generated from the Apache JMeter tool. The application is created via the .NET framework, uses the MVC pattern and is fictive. The two comparable apps before testing with Apache JMeter, will be deployed in an almost identical hosting environment to gain valuable results. Using the generated data, we deduce the advantages and disadvantages of the two architectural styles. In this paper will be discussed for the complex system, which is implemented in Kosovo, which is Health Insurance Fund Information System of Kosovo. Because of data sensitivity, we have decided to not use this system to decompose to a microservices approach, so we have used a fictive application.

*Key words: Distributed systems, Microservice, Monolithic, JMeter, Docker.*

## **Characterization of Alumina Granules Obtained by Spray Drying Process**

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### **Abstract**

The aim of this study is to the analysis of alumina (Al<sub>2</sub>O<sub>3</sub>) granules obtained by the spray drying process. The particle size distribution of the spray-dried alumina granules was determined by sieve analysis according to the according to ISO 3310-1 standard. The morphology of the A<sub>2</sub>O<sub>3</sub> granules was characterized by scanning electron microscope (SEM). The phase composition was studied by X-ray diffraction analysis. Thermogravimetric analysis (TGA) and differential scanning calorimetry (DSC) analysis were used to investigate the thermal behaviour of the A<sub>2</sub>O<sub>3</sub> granules during the thermal treatment.

*Key words: alumina ceramics, spray drying, characterization.*



## **Indentation Size Effect of Conventional and Non-Conventional Sintered Al<sub>2</sub>O<sub>3</sub> Ceramics**

Ivana Ropuš<sup>1</sup>, Lidija Ćurković<sup>2</sup>, Mihone Kerolli Mustafa<sup>3</sup>, Ivan Kumić<sup>4</sup>

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### **Abstract**

The objective of this study was to investigate and analyze the indentation size effect (ISE) using Vickers method of the alumina (Al<sub>2</sub>O<sub>3</sub>) ceramics sintered by conventional (electric kiln) and non-conventional sintering method (hybrid microwave kiln). The Vickers hardness was measured under the following loads: 0.98 N, 2.94 N, 4.90 N, 9.81 N, 29.42 N and 49.03 N. The ISE is analyzed using Mayer's law, a proportional specimen resistance (PSR) model and a modified proportional specimen resistance (MPSR) model. Dependence of the hardness on test loads indicates Meyer's index (n) that is less than 2 for alumina ceramics sintered by both sintering methods. High correlation coefficients confirm that all applied mathematical models are suitable for the data analysis, while the best correlation between measured values and mathematical models was achieved with the MPSR model with a correlation coefficient of 0.999.

*Key words: alumina ceramics, conventional and non-conventional sintering methods, indentation size effect, Vickers hardness.*

## **The Experimental Investigation of the Pollution Penetration Along the Depth Column in the Industrial Waste Deposit Gater**

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### **Abstract**

The industrial waste deposit Gater was used for disposal of different metallurgy wastes including heavy metals. The land was heavily contaminated, by heavy metals sulphates, sulphides, chlorides, and soda ash but after the mixed hazardous waste removal, there was a need for the land pollution estimation and simulation of the pollution penetration throughout the depth column and possible discharge to the ground or surface waters. In the field intended for cultivation, characteristic points were determined, based on several factors that indicated the existence of certain and required pollutants that significantly affect the quality of the soil. It was primarily visual to find these points to approach sampling and more detailed analysis based on other primary indicators such as weight, colour, granulometric composition, etc. In this significant and extensive handling of samples, the methods that are most adequate for accurate and reliable soil analysis were used, and with the obtained results it is possible to give certain suggestions for future remediation. Samples with 8 (eight) characteristic points were taken and to obtain relevant data indicating a possible method of remediation, sampling was performed from the surface and a depth of 300 mm. The results showed that lead, arsenic and ferric compounds have penetrated the deeper layer of the soil, and Copper, cadmium and antimony have been on the surface.

*Key words: Mixed hazardous waste, heavy metals, depth column, penetration.*

## **Effect of Cutting Parameters on Surface Roughness During end Milling of Al 6082-T6 Using RSM**

Jelena Stanojković<sup>1</sup>, Miroslav Radovanović<sup>2</sup>, Dragan Lazarević<sup>3</sup>, Živče Šarkočević<sup>4</sup>, Ivica Čamagić<sup>5</sup>

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### **Abstract**

In this paper, the influence of cutting parameters on surface roughness in the end milling of aluminium 6082-T6 using solid carbide end mill with three teeth is presented. The experimental plan was based on orthogonal array L8 with three factors and two levels for each factor. Factors are cutting parameters (number of revolutions, feed rate and depth of cut) and levels are different values of them. The effects of the cutting parameters different values on surface roughness were investigated using Design of Experiment (DoE) with Response Surface Methodology (RSM). Surface roughness was measured, using a Mahr profilometer in laboratory conditions. The results of measurement were analyzed in the Minitab 17 software package. This software package is used for this experiment to make contour plot, interaction plot, surface plot and regression model for data analysis. Changing values of the cutting parameter (increasing number of revolutions, depth of cut and decreasing feed rate) decrease roughness and provides the better quality of the end milling process.

*Key words: surface roughness, milling, aluminium, RMS.*

## **Decision Making Tools in Regional Sanitary Landfill Location Selection**

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### **Abstract**

Application of intelligent multi-criteria analysis has been done in this paper to rank criteria in the process of location selection for Regional Sanitary Landfill. The analysis is performed for 3 pre-selected locations which have been chosen based on the size of the available surface area, access to the site, potential preparation difficulties, groundwaters occurrences, biodiversity and proximity to the urban area. These locations have been chosen as those most suitable for construction, both from engineering, economic and environmental aspect. The analysis represents the best example of the application of intelligent multi-criteria analysis as a useful environmental management tool in the decision-making process. The analysis is performed for three proposed locations of Regional Sanitary Landfill: Kasilo, Krystal and Savina Stena. The locations are in relative proximity to the municipalities of Zvecan (Savina Stena) and Leposavic (Kasilo and Krystal). For the situation of the post-conflict region of Kosovo, there was a lack of verifiable data for the criteria, and the mathematical method have included also the results from the public debate on each location. To achieve the most objective results, the AHP and PROMETHEE methods were applied. By using these methods for calculations, the following ranking of the locations for Regional Sanitary Landfill was obtained, regarding their suitability: Savina Stena, Kasilo and Kristal. This result can contribute to the decision-making process of a prioritizing development strategy on the local, but also on the regional level.

*Key words: multi-criteria analysis, location selection, Regional Sanitary Landfill.*

## **Decision Making Tools in WWTP Location Selection**

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### **Abstract**

Application of intelligent multi-criteria analysis has been done in this paper to rank criteria in the process of location selection for the wastewater treatment plant. The analysis is performed for 3 pre-selected locations which have been chosen based on the size of the available surface area, access to the site, potential preparation difficulties, land contamination and proximity to an urban area. These locations have been chosen as those most suitable for construction, both from engineering, economic and environmental aspect. The analysis represents the best example of the application of intelligent multi-criteria analysis as a useful environmental management tool in the decision-making process. Application of intelligent multi-criteria analysis AHP and PROMETHEE has been performed in this paper to rank the best possible locations of Waste Waters Treatment Plants (WWTP). The analysis is performed for three proposed locations of WWTP. The locations are in relative proximity to the municipalities of Zvečan (N2), Mitrovica North (N1) and Mitrovica South (S1). To achieve the most objective results, the AHP and PROMETHEE methods were applied. By using these methods for calculations, the following ranking of the locations for WWTP was obtained, regarding their impact: N2, N1 and S1. This result can contribute to the decision-making process of a prioritizing development strategy on the local, but also on the regional level.

*Key words: multi-criteria analysis, location selection, wastewater treatment plant.*

## **Modern Construction Techniques of Wrapper for Social Buildings**

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### **Abstract**

During the process of transition in our country, the Social buildings' facade/wrapper had been changed in crucial forms. Applying new technology methods in buildings wrapper, was a result of sophisticated intelligent automation technology, which consist of a new era technical in our country infrastructure. In our country many of the old social buildings are being replaced with modern ones as a response to the needs for new spaces with different functions' interior, meanwhile, this has related also for changing the wrapper of building. The wrapper project for a new or existing building, require some practical analyses outside in the environment, like analyzing the background of building, the effect of other building on it, making a conversation with native people and interacting with them. All of this component is necessarily required for making a sustainable architecture with modern construction techniques. The new wrapper of the social building should consist of the buildings' character, providing long life, efficiency in all forms, reflecting safety, functionality and acceptable for different majority citizens. Also, the facade of the building must observable ability to create the game's sequences for leading the citizens into location. All these messages will be transmitted to citizens through the construction's architectural language following modern trends of materials and possess qualities of dynamics surfaces and wrapper volumes of buildings, grateful to advanced smart technology which has become remarkable on those decades and challenge us in the new wrapper invention.

*Key words: wrapping, modern construction techniques, sustainability, longevity, efficiency.*

## **Rural Non-Farm Livelihood Diversification and Poverty Reduction in Kosovo**

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### **Abstract**

The research provides an analysis of Rural Micro and Small Enterprises (RMSEs) in the non-farm sector. It investigates the sources of rural livelihoods, which are primarily based on farming activities. However, farming in this area is still carried out by about 80 percent of households in a traditional subsistence system with crude implements and in scattered plots of about 2.0 hectares or less. This subsistence farming system has resulted in increasing changes in decision making, along with dynamic processes of socio-economic and cultural changes including assets and resources which households depend on for their survival. The analysis employs household surveys aimed at collecting primary data undertaken to investigate various aspects of rural livelihoods including sources of income, employment, diversification and determinants of household income. Diversification of income activities has become an important aspect of rural livelihoods due to continued low agricultural income and output. Non-farm income activities have the potential to reduce rising rural unemployment, providing more income opportunities for young people, women and other vulnerable groups. It can provide capital for investment in child education, home improvement, asset formation and on-farm innovation or expansion. This research argues for an integrated approach towards rural development and poverty reduction through the promotion of both agriculture and non-agricultural sectors. Analysis of household income structure and determinants indicate that non-farm income accounts for about 44% of total household income and non-farm income have become an important source of capital for on-farm and off-farm investment. Ownership of non-farm enterprise, household labour force, level of education, age, farm size (land), financial capital (level of savings) and access to basic infrastructure are the main determinants of household income. Using disaggregated and distributional data the study found variations in the effect of the various factors on household income on different groups of households.

*Key words: non-farm income, diversification, household income, rural livelihoods.*

## **Arbitration and the Importance of the Arbitration Agreement**

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### **Abstract**

Dispute resolution through arbitration based on the prior alignment of the wills of the parties has long been known and has a long tradition. This specific way of resolving disputes has survived throughout this long time as a result of the trust that the parties have shown in it, presenting to the arbitration for resolving their disputes. The normative regulation of dispute resolution before international commercial arbitration in its current form is of modern times. As an alternative method of resolving disputes, arbitration manages to have recognition and implementation in both local and international society. Although it is said that resolving disputes in arbitration proceedings is the same as resolving disputes in regular courts, which puts into dilemma the conditions that must be met to begin resolving an issue in arbitration proceedings. One of these conditions is the arbitration agreement itself, which the parties themselves must establish an agreement to resolve their disputed issue through arbitration proceedings. Such a thing does not happen in the procedures conducted in the regular state courts, since to initiate the contentious issue in the regular court, only the plaintiff is enough to initiate the lawsuit and have a legal interest regarding the object of the lawsuit. The Arbitration Agreement is of special importance to the Arbitration Courts, which in case the parties are not created cannot resolve the issue in the arbitration procedure since the parties themselves are the ones who with their agreement determine the essential elements of the arbitration procedure as well as themselves, the development of the case in arbitration proceedings.

*Key words: arbitration, arbitration procedure, arbitration agreement, the importance of the arbitration agreement, the validity of the arbitration agreement.*



## **Hazardous Waste From Kizhnica in Kosovo: Assessment of its Environmental Risk**

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### **Abstract**

The mining sector is the major industrial activity of Kosovo. Due to its significance, many adverse mining effects are generally kept far from public exposure. In this work, agricultural soils in the vicinity of 3 large mine-landfills around Kizhnica mine (municipality of Gracanica) were analysed for heavy metals. The soils were sampled at altitudes from 580 to 690 meters and at depths of 5, 20 and 60 cm. Based on the results, special distribution of heavy metals and its relation with nearby waste-land fields were determined. The following heavy metals have been selected for the analysis: Pb, Zn, Cu, As, Cd, Ni, Mn, and Sb. Statistical analysis was done using software STATISTICA 12.

*Key words: heavy metals, soil pollution, environmental assessment.*

## **Assessing the Indicators of Farm-Level Sustainability – Idea Method**

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### **Abstract**

This paper aims to present the main findings of the research study for assessment of indicators on farm-level sustainability in Kosovo through IDEA Method. The IDEA method is a method for the practical assessment of sustainability. The aim was to achieve the testing of some specific objectives of the research: measurement of the sustainability in the agro-ecological aspect, socio-territorial and economic aspect; differences in sustainability between small and medium farms. The research was conducted with the collection of data from 40 farms in the region of Pristina (19 farms > 5ha; 21 farms < 5ha). The methodology used in this research lies in calculating the weight of each indicator that is tested (41 indicators and 3 dimensions). The economic, socio-territorial and agro-ecological aspects are the areas that have been studied and the sustainability of each other's impact on the farm level in Kosovo has been measured. The total value of a scale is a maximum of 100 points and hence, the higher the value collected within the sustainability scale the higher the level of stability in farms. The Economic aspects show more stable at the farm- level of all tested farms (52.8/100pt.). Following it, the Socio-Territorial aspect is below the desirable average sustainability (47.8/100pt.). Lastly, the Agro-Ecological aspect shows a desirable level of sustainability in agriculture (41.2/100pt.). Overall, farms with a surface area of more than 5 ha are found to be more sustainable in all three aspects.

*Key words: IDEA Method, farm sustainability, indicators.*

## **Evaluation of Drinking Water Quality through Microbial Indicator in Elbasan District**

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### **Abstract**

Clean and safe water is an absolute need for health and productive life. The quality of the water supplies is important in determining the health of individuals and whole communities. The analysis of drinking water for the presence of indicator microorganisms is the key to determining its microbiological quality. The present study aims to assess and compare the groundwater quality in Elbasan district, during 2018 and with WHO standards. To assess the quality of water, the microbial indicators of drinking water quality have been determined. Thus, total coliform, intestinal enterococci bacteria and *Escherichia coli* have been analysed in water samples taken in the wells of villages Labinot Fushë, Gjergjan, Papër, Shushicë and Bradashesh. The coliform pollution level continues to be a serious problem in studied villages. Water sources were contaminated with faecal wastes and posed a health risk to consumers of that water. Community-led sanitation and better water source protection are urgently needed.

*Key words: drinking water quality, faecal contamination, microbial indicator.*

## **Centralization vs Decentralization - Supply chain networks and Blockchain in the Agri-Food Business**

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### **Abstract**

Traditionally, hierarchies and centralization to efficiently allocating resources, performing coordination activities, and building relationships have characterized the organization of a firm. Coordination and cooperation represent major attributes of inter-firm relationships and are of significant value for the efficiency of the management of food supply networks. In light of the digital transformation of the economy, firms are debating how they should be shaping the path towards the digital future characterized by decentralized networks where decisions and coordination are being distributed across the participating entities. One of the key enablers in this process is blockchain which enabled the Bitcoin cryptocurrency (NAKAMOTO, 2008). Its applications have already been adopted by several industries including logistics and supply chain, agriculture, health care, public sector, and manufacturing. The aim of this paper is to provide a comparison between the key characteristics of blockchain impacting the management of traditional vertical integrated food supply chains.

*Key words: centralization, decentralization, supply chain, blockshain, agri-business*

## **Effect of Irregular Migration Flow on Agricultural Productivity in Kosovo**

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### **Abstract**

This paper examined the effects of irregular migration flow on agricultural productivity in Kosovo. Data were obtained using a mixed-methods approach comprising of desk research and field research data. Seven regions were selected based on the population size, agricultural labour availability, land accessibility and availability and agricultural performance in rural areas. From seven regions up to 1151 migrant/ households are sampled for the study. The results show not much evidence of effects migration on agricultural labour, suggesting that households whose members engaged in irregular migration had significantly reduced farm production while other households whose members are not engaged in migration had no significant effect on production. Our analysis builds on an improved database of migration stocks and flows for the last three year period, as well as migration facilitates investment, remittances and labour supply. A descriptive statistic is used to categorize the effects of irregular migration flow on agricultural productivity in Kosovo.

*Key words: irregular migration, remittances, agriculture productivity.*

## **Synergistic Effect of Different Dispersants on Rheological Properties of Highly Concentrated Alumina Suspensions**

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### **Abstract**

This study aims to develop highly concentrated alumina suspensions, stabilized with three different dispersants Darvan C-N, 4,5-dihydroxy-1,3-benzenedisulfonic acid disodium salt monohydrate (Tiron) and citric acid monohydrate. Alumina suspensions were prepared with 70 wt, % of high purity alumina (Al<sub>2</sub>O<sub>3</sub>) powder, with the average particle size 300-400 nm. To achieve this objective, the formulations were prepared by using the simplex lattice mixture design to evaluate the effect of different amounts of dispersants on rheological properties of highly concentrated alumina suspensions and their synergistic effect. Based on simplex lattice design, a cubic model was established as a function of the compositions of prepared Alumina suspensions. The optimal proportions were obtained by considering the cross-sectional area. The statistical analysis includes the use of variance (ANOVA) to determine the most significant factors and the response surface plots to interpret the relationship between the use of different dispersants to develop a highly concentrated alumina suspension. The ANOVA results indicated a high coefficient of determination value, while the 3D plots for single-response optimization present the desirability region and the optimal values of the input parameters. The use of a simplex lattice design allows us to study the influence of different dispersants and factors of formulation of the manufacturing process of concentrated alumina suspensions.

*Key words: alumina suspensions, Darvan C-N, 4,5-dihydroxy-1,3-benzenedisulfonic acid disodium salt monohydrate (Tiron), citric acid monohydrate, simplex lattice design.*

## **International Trade And International Environmental Agreements**

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### **Abstract**

Modern tendencies towards the ecological economy imply a relationship between international trade, economic growth and environmental policy. To preserve the environment, there is a need for a responsible approach to environmental protection. In that sense, it is becoming a topic of great importance at the international level, as evidenced by documents at the national, regional and global levels. Some conventions and agreements represent an effective mechanism for the protection and improvement of the environment. Some of the environmental agreements and conventions greatly affect economic activities, while many rules of international trade have environmental consequences. For this reason, the World trade organization is increasingly expanding its field of action towards environmental issues. Namely, within all important legal documents of the World trade organization, there are green clauses whose main purpose is protection against trade, which is perceived as a source of damage to the environment. The paper emphasizes the importance of environmental protection as well as the importance of the implementation of international conventions and agreement in the field of ecology, indicating their impact on international trade issues.

*Key words: international conventions and agreements, international trade, World trade organization, environmental protection.*

## **The Importance of Public Utility Investments from the Environmental Protection Aspect**

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### **Abstract**

The modern business environment and legislative framework impose a need for utility companies to make decisions that contribute to environmental quality improvement and that show the right and sincere intention in that process. All countries that want to become members of the European Union must fully harmonize their legislation, rules and procedures with the legislation contained in the so-called "acquis communautaire". Environmental protection is a very important field, not only because it is an inevitable stop on the road towards the European Union, but also because of us who live and our children who will live in this country. The waste collection system should, as soon as possible, introduce waste sorting by materials, the development of landfill and recycling systems. For years, an increasing amount of waste has been generated and disposed of in existing landfills in municipalities without any prior treatment. This practice prevents the exploitation of the potential from waste, i.e. it represents a great loss of resources and danger to life, environment and health. These are the main reasons for our determination to use this study to point out the significance and necessity of investing in utility activities that are of great importance for the environment quality improvement.

*Key words: public utility activities, accession to the European Union, environment, significance, quality.*



## **Waste Management as a Significant Aspect of Environmental Protection**

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### **Abstract**

Problems and threats which waste generates, directly or indirectly, in a large-scale, including social, economic and other, has an impact on life and the environment. The industrialized human society produces a huge amount of material. Most of it ends up as waste or garbage. The nature of this waste has changed especially in the last 40 years, due to the intensive production and use of synthetic materials, especially plastics. Waste management following environmental principles is a complex process that includes a total control by the waste management system (generation, sorting, collection, transport, disposal and treatment of waste). To solve this problem of inadequate treatment, the process must be financially supported, strategically planned, institutionally organized and regulated by law. Investing in waste management is financially profitable as it is based on the fact that adequate waste management brings high savings and significant profits at various levels, developing the so-called "green economy". One of the important preconditions is the involvement of the population in the process of planning and decision-making about problems in this field. It is necessary to work on developing environmental awareness at different levels as industrial and municipal waste can become a significant energy resource of raw material, as well as a source of new jobs

*Key words: management, waste, financing, economic benefit, environment.*

## **Analisis of Stress State in a Plane Anisotropic Field Weakened by a Circular Hole**

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### **Abstract**

This paper analyzes the impact of the circular hole as a source of stress concentration on the stress state of a uniaxial strained anisotropic, i.e. orthotropic plate, exposed to a static load. It is the fact that mechanical parts with holes are often encountered in practice. Knowledge of stress distribution is of paramount importance for engineering practice. Therefore, the objective of this paper analyzes the impact of the circular hole as a source of stress concentration on the stress state of the uniaxial strained orthotropic plate since the practice has shown that the largest number of structures is weakened by the hole shape. In this paper for obtaining the results of stress distribution in a plane anisotropic field weakened by a circular hole, analytical and numerical methods were used. The methodology was applied to enable the determination of the values of the stress at each point of the plate, as well as at points at the hole contour, which is based on the application of the basic equations of the theory of elasticity.

*Key words: circular hole, finite element method, orthotropic plate, stress, stress concentration, stress distribution*

## **Hyper-Accumulation of Nickel by *Bornmuellera dieckii* Degen as an Endemic Plant Species in Kosovo**

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### **Abstract**

The objective of this study was the determination of chemical elements in *Bornmuellera dieckii* (Fam. Brassicaceae), as an endemic plant species, which is located only in Kosovo (so far it has been found only in some localities in the Sharri Mountains). In the same location and the same conditions, for comparison, we collected another Balcan endemic plant *Stachys scardica* (Fam. Lamiaceae). Also, we collected the soil (serpentine) in which they grow. The plants were separated into three parts: root, stem and leaf, they prepared in a standard procedure of cleaning, drying and digested in the microwave digestion system. The plant's samples and soil samples were analysed by Flame atomic absorption spectroscopy (FAAS). The level of nickel concentration in *Bornmuellera dieckii*, were: 4100 mg/kg in the root, 9700 mg/kg in stem, and 24290 mg/kg in leaf. These values were 40-400 times higher than in *Stachys scardica*, and 2-12 times higher than in the soil sample.

*Key words: endemic plants, Bornmuellera dieckii, hyperaccumulating plants, nickel, serpentine soil, microwave digestion, FAAS.*

## **Multidisciplinary Approach to Biogas Production**

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### **Abstract**

The use of renewable energy sources, which focus on sustainable development, faces many challenges that were insufficient in mutual understanding of the actors involved in this process. This paper will discuss the need for a multidisciplinary approach to electricity generation in biogas power plants with a focus on the raw material supply chain. This paper aims to point out possible improvements in the process of operation of biogas power plants, which is most common in the Republic of Serbia and which can be achieved through joint efforts of researchers, entrepreneurs, and decision-makers, based on good practices implemented in the EU. Biogas power plants use organic raw materials: silage based on energy crops and manure from livestock production, from which, in a highly automated process of anaerobic digestion, they obtain biogas from which electricity is further produced and placed on the grid at Feed-in tariffs. For this product to be ecologically, energetically and economically sustainable, close cooperation of experts in the field of agriculture (agronomists and cattle breeders), biology (microbiologists), soil science (with a focus on nutrient management), mechanical engineering (electricity production from biogas) is necessary, spatial planning (to avoid the use of fertile agricultural land for biomass production), environmental science (reduction of greenhouse gas emissions), waste management (to expand the list of materials used as raw materials), energy, and decision-makers at the state level.

*Key words: biomass, renewable energy sources, biodegradable waste, resource efficiency, environment.*

## **Relation of Folic Acid with the Risk of Cancer**

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### **Abstract**

Folic acid is the synthetic form of vitamin B9. Excess folic acid leads to saturation of the enzyme dihydrofolate reductase, resulting in an inability to convert the acid to the liver and develop a tumorigenesis mechanism. The objective is to assess folic acid with the risk of cancer mechanism. A bibliographic review was performed from the PubMed, Scopus, and science direct databases. Keywords as folic acid, folate, cancer risk, cancer, and folic acid were used. The initial search yielded 250 articles, of which 42 primary studies and meta-analyses of the last five years, according to the criteria, were selected. Folic acid administration is mainly associated with a reduced risk of developing head and neck cancer, pancreatic, esophageal, and hematologic neoplasms, and does not appear to be a protective mechanism for lung, breast, and cervical cancer. Gene polymorphisms appear to be related to methyltetrahydrofolate reductase, which affects DNA synthesis and the increased risk of developing prostate cancer. Folic acid deficiency or depletion is associated with an increased risk of developing malignant neoplasia. However, studies are needed to correlate acid levels, gene polymorphisms, and the possible cancer risk.

*Key words: folic acid, cancer risk, cancer.*

## **Building Peace through Environment Reparations**

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### **Abstract**

Kosovo is marked by a largely unaddressed legacy of violations of human rights and humanitarian law, and environmental destruction as a consequence of the 1999 war. As Kosovo society struggles with its state-building processes and its new European future, the interrelation between the environmental reparations armed conflict, and its impact on gender and peacebuilding remains unaddressed. The prior experience has demonstrated that failing to consider environmental harm will affect the ability of certain communities—and perhaps entire nations or regions—to participate in peacebuilding and move forward after conflict. At the international level Resolution 2422 (2015) of the Women Peace and Security resolutions and General Recommendation, No 37 by CEDAW both indicate that the degradation of the environment and climate change differently affects women and girls. At the national level Kosovo Constitution provides for protection of environment and involvement of all interested parties in the protection of environment and biodiversity. However, the existing legal framework in Kosovo which directly integrates international human rights standards and conventions does not regulate the environmental reparations and its impact on women's and its interrelation with peacebuilding. This study will explore the relationship between gender, the environment/nature and peace; what role do women play in environmental protection/defending nature; what gendered obstacles do environmental protectors face in the context of armed conflicts; the place and space that environmental reparations have in the Women, Peace and Security agenda; the understanding of the environmental reparations; and is there effective access to justice concerning gender, peace and the environment? The study will employ analytical methodology through analyzing international standards and Kosovo legislation, on environmental and human rights protection. Also, the comparative methodology will be used to assess other war-affected territories and how the issue of environmental destruction and reparations have been dealt with.

*Key words: environment, gender, peace building, human rights, reparations.*

## **Influence of Ameliorative Application of Lime and Farmyard Manure, and Some Soil Physical Properties on the Firmness of Pseudogley Soil Type**

Saša Barać<sup>1</sup>, Milan Biberdžić<sup>2</sup>, Aleksandar Djikić<sup>3</sup>, Goran Dugalić<sup>4</sup>, Gordana Sekularac<sup>5</sup>,  
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### **Abstract**

This study examines the effect of NPK fertilization and ameliorative application of lime and farmyard manure on pseudogley soil firmness, over five years, depending on certain soil physical properties as indicators of soil quality. For each treatment, soil samples were taken and analyzed for major physical properties, and field measurements of soil firmness were carried out using a penetrometer (Eijkelkamp hardware, version 6.0). The results show that the long-term combined ameliorative application of lime, farmyard manure, and mineral NPK fertilizers decreased soil compaction from 3.0 MPa (0-50 cm) to 1.7 MPa (25-30 cm). As a result of drastic changes in microclimate conditions at the site, especially in the surface layer (0-5 cm), the soil firmness varied significantly throughout the years, ranging from 3,30 in 2012 to 1,08 in 2009. Micromorphological characteristics (aggregate composition, the stability of structural aggregates in water, bulk density, total porosity) clearly show a significant indirect effect on soil compaction, expressed through a strong correlation with soil firmness. A decrease in soil firmness due to significant improvements in soil micromorphological and water characteristics in adverse weather conditions demands a combined use of organic matter (manure) and limestone (Ca<sup>2+</sup>) for a rapid increase in the productivity of degraded pseudogley soils.

*Key words: fertilization, ameliorants, firmness, micromorphological characteristics, pseudogley.*

## **Application of Machine Learning Techniques in the Air Pollution Assessment and Forecasting**

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### **Abstract**

The air pollution in industrial areas is affected by meteorological conditions. In the case of the constant source of pollution, there are frequent variations in the range and intensity of the pollution. In the case when there is no substantial grid of probes that will measure the pollutants' concentrations and define the impact zone, there is a need for the pollution concentration assessment, based on the machine learning techniques application. The concentration data on PM<sub>2.5</sub> and PM<sub>10</sub> were collected from the measuring site and paired with the meteorological data for the same timeframe. The probes have been transferring the data on PM particles concentrations, and the values for the Temperature, Humidity, Wind speed and directions impacting the PM concentrations. By machine learning techniques applied, there is a possibility to assess and forecast the pollution for the specified meteorological conditions, based on the previously collected data. The present study uses a machine learning approach, based on multiple linear and non-linear models, to effectively estimate the concentrations of pollutants. For multiple linear regression (MLR) models, the stepwise method was used, while non-linear models were developed by applying the random forest (RF) algorithm. Both machine learning MLR and non-linear tree-based RF prediction models were identified as suitable for predicting the concentration of the pollutant in the air. The models can be used for improving the knowledge and economic efficiency of air safety and environmental pollution studies.

*Key words: machine learning, pollution, forecasting prediction, PM<sub>2.5</sub>, PM<sub>10</sub>.*



## **Synthesis, Characterization and Antibacterial Activity of Co(II) Complexes with Pyrimidine Based Ligand Derivative**

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### **Abstract**

The article deals with a study of synthesis Co(II) complexes with pyrimidine based ligand derivatives. The ligands and their Co (II) metal complexes have been characterized by IR, <sup>13</sup>C-NMR, <sup>1</sup>H-NMR, Mass spectra and Elemental analysis. Co(II) complexes of the pyrimidine derivatives were prepared from chloride salts of Co(II) in ethanol. Antimicrobial activities of the ligands and their complexes have also been tested. The results show that Co(II) complexes possess higher antibacterial activities than ligands towards the bacterial species.

*Key words: Co(II) complexes, pyrimidine derivatives, antibacterial activity.*

## **The Role of Open Public Spaces Before and During the COVID19 / Coronavirus Pandemic in the Main Municipalities of Kosovo**

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### **Abstract**

Since the first case of COVID19 - Coronavirus was identified in December 2019 in Wuhan, CHINA, despite warnings, very few people in Kosovo have thought that this virus will be pandemic level and will have an impact in the daily life of the inhabitants, the well-being of each family, economic development and the environment. Like many countries in the world, Kosovo was in an unenviable situation to deal with the COVID19 - Coronavirus. With a fragile health system and insufficient professional services, after identifying the first case of COVID19 - Coronavirus infection in Kosovo and taking measures to deal with the pandemic virus; the lives of the people of Kosovo have changed radically. Despite dealing with the pandemic, unstable politics in Kosovo made the situation even more difficult. This research presents the assessment of the use of open public spaces before and during the COVID19 - Coronavirus pandemic as well as the impact on the environment. The period during the pandemic is divided into two phases: the rigorous phase and the mitigation phase to prevent the spread of the virus. Many participants of different genders, ages, professions answered the questionnaire for the two phases of the pandemic by providing data which would help many municipalities to think in the future about the serious treatment of public spaces and the protection of the environment.

*Key words: public spaces, Covid19, environmental, social distancing, urban design, safety.*

## **Sexual Harassment as the Hidden Criminogenic Potential of Nightlife Entertainment Spots in Cities**

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### **Abstract**

Sexual harassment, which includes verbal, non-verbal, and physical behaviours referred to gender, gender expression, or sexual orientation of a harassed person, is incorporated in basically all areas of human activity. Among places, where sexual harassment occurs, nightlife (entertainment) areas in cities remain rather under-researched. The purpose of the paper is the presentation of the criminogenic potential of nightlife areas, focused on the occurrence of sexual harassment. The criminogenic potential of nightlife areas arises from, inter alia, the presence of alcohol and drugs in these areas, which contributes to the emergence of various types of deviant behaviours, including sexual harassment. The culture of accepting sexual harassment in entertainment spots is widely present, as well as high pressure on victims to tolerate sexual harassment. If we set entertainment spots in the context of situational action theory (Wikström, 2006), they can present an environment where sexual harassment or sexual assault offer an acceptable action alternative. Sexual harassment, occurred in nightlife areas, represent an issue that, firstly, is not explicitly legally restricted, and secondly, its occurrence is challenging to prove. Furthermore, studies conducted abroad reveal that street harassment and stranger harassment have potentially significant effects, not only on victims but also at the community level, since it may be used as a reason to limit or deter access to public spaces, as an additional mechanism aimed at the oppression of, particularly women's, public participation. Its long-term and overall effects might also be detrimental to women's safety, freedom and participation in public life.

*Key words: sexual harassment, nightlife, entertainment spots, cities.*

### **3. Social Practice and Development**

- Local Authority, Citizen's Services, Participation
- Business Management and Society
- Entrepreneurship and Corporate Innovation
- Small Business
- Human Resource Management
- Global and International Perspective
- Tourism
- Industry
- Manufacturing

## **Small and Medium Enterprises: Importance for the Kosovo Economy**

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### **Abstract**

This study aims to broaden the understanding of the importance of SMEs (Small and Medium Enterprises) for the economy of Kosovo, especially in terms of economic development, labor market and innovation. The study was conducted through analysis of documentary sources such as relevant reports of national and international institutions as well as relevant scientific papers. The scientific contribution of this study is theoretical and aims to help researchers in the field for an expanded understanding of SMEs over national economies. This study provides a concise framework of important elements on the economic impact of SMEs on Kosovo's economy. Examination of available data has shown that the SME sector plays a crucial role in the Kosovo economy. The key role of SMEs was emphasized in terms of overall value generated and the labor market while innovation remains a challenge to be addressed by stakeholders.

*Key words: SMEs, economic development, labor market, innovation.*

## **Female Unemployment in Mitrovica Region**

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### **Abstract**

Unemployment presents a concerning issue worldwide. It is known as a serious macroeconomic illness. The losses from unemployment are severe, cannot be compensated and are much greater than losses from inefficiencies or monopolies. Unemployment also causes demotivation and devaluation of human capital. By reviewing the literature, we found that there are numerous research papers and reports concerning gender gap and inequality in employment, wages and education. We found that there is a scarcity in the literature concerning unemployment and in particular female unemployment. Thus by using the existing literature and labor source survey from Kosovo Agency of Statistics this paper aims to investigate the female unemployment and inactivity in the labor market in Kosovo. Besides, by using the secondary data from the Ministry of Labor and Social Welfare - Employment Agency of the Republic of Kosovo special focus in this paper is given to female unemployment in Mitrovica region, whereas the unemployment is explored, by ethnicity, age group and level of education for both genders for the period 2013-2018. The findings show that the unemployment trend during the years 2015-2016 had an increase, while during the years 2017 -2018 there was a significant decrease. The highest number of female job seekers are of Albanian ethnicity, in the age group 25-39 years and, the vast majority of unemployed females are with vocational education or are non-educated.

*Key words: labor market, female unemployment, job seeker, labor market inactivity.*

## **Incharge: A Design Science Approach to the Design of a Platform Business Model for Electric Car Chargers**

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### **Abstract**

Nowadays, we are experiencing a big change in terms of mobility throughout the world: due to the climate changes, there is the necessity of seeking new and more ecologic alternatives to the traditional gas-powered automobile, that's how the electric cars have appeared as an option to fight the spread of greenhouse gases. However, with the exponential growth of the electric car market, there was a necessity of creating a wide network of car chargers, both from the governments and other private parties. Therefore, what we can experience is that this network is not growing as much as the market is and that the available platforms do not satisfy the users, as it is stated on a survey made for this project, where the users that have answered, saw the lack of information regarding the charge availability and functionality, as well as having no possibility to book a certain charger beforehand, as the main things that have to be changed inside those platforms. This paper presents the design of platform Incharge, both available online, and with applications to Android and iOS operating systems, that seeks to solve the problems stated on the previous paragraph and to facilitate the management of the charging points, not just for the users but also for the owners of them. This project is guided by the Design Science Research methodology, where it is explained every step since the beginning until the prototype that is presented. The prototype was also evaluated, where it was concluded that the platform offered advantages compared to the others available. It is also included a business plan, to help understand the financial needs of this particular project and also to determine it's feasibility, which, despite the necessity of a big financial investment, revealed itself as a lucrative business in a medium-term prospect.

*Key words: electric cars, online platform, design science research, entrepreneurship.*

## **The Effects of Taxation on the Economic Growth of the Republic of North Macedonia**

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### **Abstract**

The main objective of this paper is to determine the impact of direct and indirect taxation on the economic growth of the Republic of North Macedonia for the last two decades. In this regard, the Augmented Dickey Fuller (ADF) and Philips – Perron (PP) test has been employed to determine the unit root of the time series. Also, the results suggest data be stationary in their level, thus Vector Autoregression (VAR) model has been utilized to investigate the relationship between direct and indirect taxes and economic growth for the period 2000 – 2019 for the case of the Republic of North Macedonia. Moreover, the results imply that indirect taxes have positive, while direct taxes have a negative effect on the Macedonian economy. These results are mainly due to the high dominance of Consumption tax compared to Personal Income Tax and Corporate Tax that by nature are more distortive than Value Added Tax and Excise. Finally, taxation is assessed as an important factor that can stimulate and promote the economic growth in the long run in a developing country such as the Republic of North Macedonia, thus should be encouraged efforts for constructing effective policies with a long-run perspective.

*Key words: direct taxes, indirect taxes, economic growth, VAR.*



## **The Rights of Civil Servants in Kosovo to Increase Their Professional Skills**

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### **Abstract**

Professional and efficient public administration remains the foundation for the overall social development of a country. This is especially important for transitional societies that face major challenges that hinder institutional development towards democratic accountability. For Kosovo, which aims to integrate into various international organizations, the capacity of public administration to develop public policies plays an essential role in determining the results of reforms and progress towards achieving certain institutional objectives. Therefore, the performance of the public administration depends mainly on the skills, training and professional capacities of civil servants. The Ministry of Public Administration uses a specialized agency, the Kosovo Institute for Public Administration, to train and enhance the skills of civil servants. The quality of administration performance depends largely on civil service training programs. Professionalism is one of the biggest challenges for the public administration and the civil service in Kosovo, which is failing to fulfil its function to the extent specified by legal provisions. This paper explains the efforts undertaken in Kosovo to increase the skills of civil servants through thematic training programs. To achieve the objectives of the research, qualitative, normative legal and comparative methods have been used to reveal the legal obligations to increase the skills of civil servants by comparing them with the established practices.

*Keywords: public administration, meritocracy, civil service, professional training, public policy.*

## **Customer Relationship Management Misconceptions and Their Effect on Implementation**

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### **Abstract**

This paper examines the Customer Relationship Management (CRM) literature in terms of concepts, strategies, tools, and implementation. More specifically, it derives conclusions on the root causes of CRM failure, analyzing misconceptions about CRM that have led to various implementation hurdles. Failure rates are high, yet CRM expenditure keeps increasing - a strange phenomenon! Apart from other factors that led to misconceptions about CRM, one of the key factors has been the inability to build a common definition of CRM. This confused organizations as to what CRM does, which led to organizations building greater expectations about CRM, and in turn, failing to implement CRM to their advantage. Many organizations have mistakenly approached CRM as a software tool only, which has led to implementation without strategizing and increased the chances of failure.

*Key words: customer relationship management, misconceptions, implementation challenges, customer centricity, customer knowledge management.*

**The evolving role of the Relationship Development Manager in developing trust and maintaining efficient supply chains - A study of manufacturing companies from Kosovo and Albania**

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**Abstract**

The paper focuses on the development of a theoretical framework of the evolving role of managers in supply chains from the perspective of managers from manufacturing companies from Kosovo and Albania during different stages of the supply chains process. A multi-case study with more than 42 manufacturing companies from all the South Eastern European countries with an across broad industry groupings, aims at understanding successful the manager's role development and eliminate the waste of non-core roles or re-organize them to ensure lead time, creating and maintaining trust, efficient of supply chains, quality customer value and competence. Based on the findings of the secondary data analysis, the researcher will construe a semi-structured interview with the purpose to give a broad relevant theoretical framework about the evolving role of managers on supply chains and creating and maintaining the trust. The research will be focused on the different type of managers: General managers, Functional managers, Frontline managers. Consequently, managers have professional experience in managing business transformation in their company. Moreover, we use the critical method that seeks to correct conclusions or to disprove faulty conclusion about the role of managers in the supply chain. The framework-building process will include an evaluation period with academic experts in Operations & Supply Chain Management to increase relevance and robustness of the evolving role of management in developing trust and maintaining efficiency in the supply chain.

*Key words: supply chains, managers, manufacturing companies.*

## **Innovative Activities of Small and Medium Enterprise in the Area of Tourism to Meet the Changes in the Market**

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### **Abstract**

During the years of operation of small and medium enterprises in the area of tourism, the management was focused on attracting a quality workforce to improve business efficiency. The main problem faced by the business entities was the insufficient qualification of the employed workforce. On the other hand, there was a foreign quantitative alignment of the workforce with the volume of business. Workforce fluctuation is another reason that is negatively affected by the SME in the area of tourism. The high degree of labour turnover which leaves negative consequences on business, in the sense that every newly employed worker needs time to get used to the new job he performs, which further slows down the normal functioning of the workforce. The identified problem of the degree of qualification of the workforce of the SME in the area of tourism became bigger in with the investment in new and modern assets. The strategic activities carried out by the management of the SME in the area of tourism are adopted to perform business and operating conditions effective, but it is necessary to constantly make them. This paper presents a possible solution for innovative activities of SME in the area of tourism to meet the changes in the market.

*Key words: small and medium enterprise, area of tourism, quality workforce, qualification of the employed, workforce fluctuation, the strategic activities.*

## **Possibility to Collect Receivables in the Area of Public Services using Modern Available Methods**

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### **Abstract**

In the turbulent changes in Western Balkans, there is a problem in the process of water billing in the utility companies. The main reason for that refers to the impossibility of proper charging for services provided to customers: households and users because of outdated technologies. In the area of the modern market economy, the fact is that the companies need to perform the changes in their business. The subject of this research is designed to cover all relevant aspects of investment policy in the company, as well as the organizational structuring in the company as segments of strategic management to solve the problem of water billing in the utility companies. Also, special importance for achieving this goal is the investment of capital in the growth and development of the company, aiming to solve the problem of collecting receivables the services of the company. An analytical starting point in solving the problem of a specific case is necessary, based on proposals that must be purposeful, taking into account all the partial parts that make up this company.

*Key words: public services, receivables, investment policy, organizational structuring, strategic management, the growth and development.*

## **Social Work, Interdisciplinary Activities, Rules and Social Traditions**

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### **Abstract**

In general, Social Work is an academic and professional discipline. Researches and supports the quality of life and subjective well-being of individuals, groups and communities. Engagement or social work is achieved through a series of actions such as research, politics, community organization, direct practice, critical interventions, learning about the benefits of these effects. But, also, another element is through social disadvantages: poverty, mental and physical illnesses or social incapacity, looking at civil liberties and human rights. The research of these factors is focused on the administration, counselling and development of social programs. Also, social work is related to scientific disciplines with theoretical bases such as Economics, Sociology, Law, Medicine, Philosophy, Politics, Anthropology, Psychology, ethics and education. So Social Work is professional moving work. It is integration, solidarity and has a connection with the society in which the practice of social work takes place. So social work deals with social change, with resolving interpersonal relationship issues. It relies on its methodology in the systematic field of evidence identification of research and practice knowledge. Study and research rely on the recognition and complexity of the interactions of human beings and their conditions. So research aims to explore human capacity and impacts also from bio-psychosocial factors. So the focus is on the advancement of social law as well as the protection of human rights and the development of general social systems.

*Key words: work, social, interdisciplinarity, institutions, integration, rules.*

## **Modern Approaches and Practices in Performance Management with a Focus on the Key Role of the Leader**

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### **Abstract**

In today's market economy and environmental dynamics, the need for high productivity, quality and speed of execution, give rise to a remarkable number of tools and techniques for management, reengineering, change management. However, this leads to more and more wrong strategies, lack of clarity, lack of communication between leaders and teams, poor quality of the result. Very often this is due to incorrect approaches and performance management; the ambiguity of what is expected of employees and teams in the performance of their duties; lack of competence on the part of the team leaders; lack of innovative approaches and practices for performance and efficiency management, etc. In this context, the importance of performance management for organizations today is extremely high, and at the same time, the role of the leader - his / her qualities, competencies, effectiveness - deserves more attention. Leaders have particular characteristics and are directly related to performance management. It is in them that the competencies of leaders as leading figures in the process of implementation and its management are rooted. Each organization is guided by its implementation and presentation, and leaders focus on achieving results. They motivate, inspire and train members of the organization to achieve these lofty goals. The main purpose of this article is to propose and analyze a more up-to-date toolkit to improve performance management practices, focusing on the competencies and qualities of leaders in organizations.

*Key words: management, performance, leaders, competencies, approaches.*

## **The Role of NGOs in the Public Decision-Making Process in Kosovo**

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### **Abstract**

The purpose of this paper is to analyze the role of NGOs in the public decision-making process in Kosovo and to present the current relationship between NGOs and government. The NGOs and voluntary organization act as a catalyst in bringing the new initiatives and community participation in developing trade social accountability. Today, the necessity of strengthening public participation and the voice of NGOs is more demanding and urgent than ever before. Despite many activities and attempts in Kosovo and many developed provisions, the lack of effective enforcement and implementation of various laws without the involvement of NGOs in the decision-making process continues. In the first part, the paper presents the role and the influence of the NGOs in the public decision-making process in Kosovo. In the second part, the paper comparatively analyses the experience of some European countries regarding NGOs involved in the public decision-making process and identifies the best practical model that can be implemented in Kosovo. An exploratory study approach is used to present the significance of NGOs, their evolution in Kosovo, the interactions with different institutions, and the impact they are expected to have on the development of new modern and stable society.

*Key words: NGO, decision making process, Kosovo.*



## **Factor of SME Finance: Lessons from Kosovo**

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### **Abstract**

In this study, we investigate the factors of access to finance for small and medium enterprises (SME-s) in Dukagjini region, Kosovo. To contribute to the SME financing literature this paper uses the data received from interviews based on a self-organized questionnaire with 243 SME-s in Dukagjini region. Through linear regression model key factors are identified which determines SME growth financed by banks. The empirical results indicate a positive correlation among variables firm's age, size, business plan and financial performance to the sources of financing and the investment growth. We found evidence that firms operated with more number of owners and pledge of collateral have higher credibility to obtain bank financing. The paper provides some important conclusions and implications for policymakers and entrepreneurs.

*Key words: SME, access to finance, bank loans, Kosovo.*

## **Trade Liberalization and Economic Growth in New EU Member Countries: Perspectives and Challenges**

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### **Abstract**

The recent developments in the economic theory argue that international trade plays an important role in the economy of each country and that having a completely liberalized market is the most efficient way to boost economic growth. The European Union's economic and trade policy has made the EU the strongest and most competitive single economy in the world, playing a leading role in international trade and trade negotiations. The trade liberalization in EU countries is often found to be the key determinant of fostering economic growth due to greater economic efficiency that is induced by lower trade and transaction costs, increased specialization, scale economy and competitive pressure, which boost the economic performance and growth rate of a country. The paper aims to analyze the effects of trade liberalization on the economic growth of the latest EU member countries (Romania, Bulgaria and Croatia). The study reveals the main challenges and prospects of the market convergence process suggesting that the positive effects of the market openness are conditioned by the level of the initial GDP per capita and other explanatory variables, such as industrial and technological development of a country. The findings of this paper have allowed obtaining a better understanding of the relation between the economic growth and international trade in the context of new EU members and will be a worthy lesson to current EU candidate countries that should find a solution for optimal utilization of the benefits of the market liberalization process and achieving the sustainable economic growth.

*Key words: international trade, economic growth, market liberalization, transition economies.*

## **Engaging Children in Sports and Other Activities in the Function of Preventing the Challenges of the Modern Age**

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### **Abstract**

As one of the major issues now facing modern society, refers to the prevalence of the excessive Internet and electronic devices use in the everyday life of young people. This causes several harmful consequences. Namely, most of their free time, young people spend alone, distanced from society, family and nature. Growing up in such conditions causes psychological problems for young people, such as insecurity, apathy, lack of happiness. This is especially evident later, at the times when they decide to enrol in schools/colleges. Namely, young people have a low level of awareness of their abilities, interests, competencies and values, and they especially lack information about the labour market and choosing a future profession. There are a number of possibilities for young people to get rid of these addictions of the modern age. Certainly, as one of the best is the involvement of young people in numerous sports activities beyond the number of classes provided by the curriculum. This paper aims to point out this and remind the intellectual public and general public of the importance of sports and sports activities in shaping the personality of young people, and present them as a significant driving force in the development of national economies. The results of the research show sports activities that should be introduced into the curriculum of non-teaching activities necessary to introduce young people to a healthy growing up, and which will contribute to their physical and intellectual progress. The paper indicates the numerous benefits of sport, from the fact that sport is a powerful weapon against addiction to the fact that it can be a significant export branch and a means of combating crime.

*Key words: sports activities, Internet addiction, psychological problems of young people.*

## **Macroeconomic Performance and the International Competitiveness of the EU Countries in the Context of EU Integration**

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### **Abstract**

Enhancing the competitiveness of the contemporary economies in the era of globalization has become a priority in the agenda of the scientific and policy creation debate for all world economies. The role of a country's competitiveness has been addressed by many scholars aiming to assess the extent to which this concept is associated with macroeconomic matters such as social welfare and attracting foreign direct investments. Along with this debate, there has been a growing interest in understanding the linkages between the competitive forces and the gap in economic progress across the EU members being one of the crisis drivers within the EU. Fitting this gap and achieving greater convergence among the EU countries has been one of the critical goals in shaping the European structural policies reforms. However, following the empirical findings, there has been noticed a little consensus on what are the main sources of a country's economic progress being addressed through the prism of national competitiveness, particularly if being studied in the context of EU integration. In this context, the study aims to evaluate the macroeconomic performance of 10 selected EU countries, measured through the prism of Porter's diamond framework, looking into a number of competitiveness factors' relative importance and contribution to the economic development for the observed period (2000-2017). The findings of the study have brought a better understanding of what are those countries whose economy is driven by efficiency and more traditional factors and what are those whose advancement and competitiveness is based on innovation.

*Key words: macroeconomic performance, international competitiveness, factors of competitiveness, efficiency, innovation, EU countries.*

## **Consumer Intentions and Behavior for Fast Food: Case of Lithuanian Company**

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### **Abstract**

The goal of the research is to reveal consumers' intentions and behavior for fast food usage while analysing the case of Lithuanian company. The analyses are performed using a quantitative questionnaire applying it to consumers of fast noodles products. 918 respondents were questionnaired. The reliability analyses of Cronbach alpha showed great consistency (0,994 with 107 items). Research results revealed that 71.7% of respondents from the research are consuming fast food noodles and 5.1% from them are consuming it every day, 8.3 % every week and 23.6% every month. Furthermore, their choice to consume fast food noodles are influenced by such aspects as a deal of price, easiness of preparation and taste than by such aspects as price, brand or environmental friendliness. The research results deeply indicate the specificity of fast food consumption and could be useful for fast food producers thus it creates value for practitioners. Scientific value is reached in the creation of deep and specifically applicable questionnaire for collecting data and making their analyses.

*Key words: consumer behavior, fast food, purchase of noodles, consumer's needs.*

## **Firm and Country Specific Determinants of Financing Obstacles of the SME's Operating in the Western Balkan Region**

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### **Abstract**

The objective of this study is to analyze the firm and country-specific determinants of financing obstacles of Small and Medium Enterprises operating in the Western Balkans. Thus, the sixth round of the Business Environment and Enterprise Survey (BEEPS VI) data conducted in 2018 – 2020 covering 41 economies and 28.000 enterprises. In this regard, OLS and probit model has been used to determine the factors of the financial obstacles that face SME's in this region, where the panel regression results reveal that from firm-specific factors, firms size, age, ownership and transparency have resulted as most significant factors of financing obstacles of the SMEs in Western Balkans. On the other hand, from country-specific factors, bank concentration, domestic credit and inflation play a significant role in the financing obstacles of SME's in Western Balkans.

*Key words: financing obstacles, SME's, probit, Western Balkan.*

## **Festival tourisms effect on economic growth: Case on Dokufest film festival (2015-2019)**

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### **Abstract**

Festivals are very important in the history of the human being. It gives peace and breaks the monotony of the people. DokuFest is one of the most successful and best-known festivals in the region and the world for documentary and short films. DokuFest's impact on the country's cultural life is one aspect that has already been highly appreciated by many acquaintances of this field. In addition to the cultural aspect, DokuFest has a great impact on the economy of Prizren in particular, but also in Kosovo in general. The purpose of this study is to measure the economic impact of the nine-day festival between 2015 – 2019 in the city of Prizren. Because of the high informality that exists in Kosovo, the exact measurement of this influence and the cash flow is difficult. For this reason, a questionnaire was compiled, supplemented by 3,015 respondents - participants in DokuFest. In addition to the surveys, data from the Kosovo Tax Administration on revenues from the city of Prizren were obtained during the summer months. TAK data show that it has higher incomes during the month of the DokuFest festival. The analysis were made using the SPSS 23 program, based on questionnaires and was used data from 2015-2019. The results show us that the DokuFest Kisa Film Festival in Prizren had a serious effect on the economy of the city during the dates set. Most of the participants in the survey responded that DokuFest was not only in festivals but in the next months it was tourism.

*Key words: festival tourism, film festival, economic growth, Kosovo.*

## **Regression Analysis in Mixed Costs Splitting**

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### **Abstract**

Classifying mixed costs is a very important process for companies. By doing so, companies can assemble Cost of goods manufactured statement that can be used later in calculating the Cost of Goods Sold. By separating mixed costs into two components, companies can make better decisions for investment in the future, for example, if a company incurs a high level of direct labour costs in manufacturing, they may invest in machinery to reduce the level of variable costs and to raise the level of fixed costs instead. Regression analysis is one of the most widely used techniques for analyzing multi-factor data. Its broad appeal and usefulness result from the conceptually logical process of using an equation to express the relationship between a variable of interest (the response) and a set of related predictor variables. Splitting mixed costs by using regression analysis is a good manner for companies to understand the behaviour of very costs, and helping them to make good decisions for the future. This paper is also going to highlight the importance of using regression as a method of splitting costs and understanding the costs behaviour by management.

*Key words: regression analysis, mixed costs, fixed costs, variable costs.*



## **Innovation Contests as a Measure to Generate New Impulses for the Forest-Based Sector – the Case of “Neue Holzwege” in Salzburg**

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### **Abstract**

As one of the most important contributors to the Austrian economy, the forest-based-value chain has undergone significant changes in the last decades and strives continuously for new ways to create competitive advantages. As a relatively young method, open innovation has proven to be a valuable tool for companies and industries to not only foster innovation but also enhance customer engagement. This case study describes the process of initiating a crowdsourcing innovation contest to generate new impulses for the forest-based sector in the Austrian federal state of Salzburg. The contest “Neue Holzwege” (New Ways in Wood) was conducted in the spring of 2020 as a cooperation between research, academic partners and the regional forest-based sector industry and SME association. Its aim was not only spawning ideas but drawing attention towards the newly established open innovation platform, build acceptance for crowd-sourced approaches, create the possibility to communicate and engage with participants of the contest and to realize the most promising ideas. Furthermore, it shows how this contest and its implementation could be used to gain knowledge about certain aspects of the nature of crowdsourcing approaches in innovation, as well as the perception of the forest-based sector itself. Through a representative online survey (n=757), the young millennials group (20-29 years) was examined, since they represented the main target group of the contest. Besides, the case study describes how the contest was integrated into courses about innovation methods for undergraduate and graduate students and how theoretical knowledge was complemented with active participation in the contest. Finally, future steps are highlighted regarding the realization of winning ideas and how the sector can benefit.

*Key words: open innovation, crowdsourced innovation, wood industry, timber industry, forest-based sector, small and medium-sized enterprises, contest.*

**Impact on and Impact of Relational Energy Within Organizations:  
Correlations with Psychological Capital, Humor, Job Engagement, and Job  
Performance**

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**Abstract**

This study scrutinizes relational energy in the workplace from two standpoints: What influences a workers' relational energy? What impact does the latter, in turn, reveal among coworkers? An integrated model of some antecedents and descendants of relational energy is proposed. To the author's knowledge, it is the first time that a study approaches relational energy by constructing a model with precursors and successors simultaneously as well as combining those five variables in a single model. Also, this work incorporates variables of Positive Organizational Scholarship and Positive Organizational Behavior in the same model which is postulated here. Further to explore the existence and significance of relational energy among coworkers, this model's exclusive assistance lies in the capability of detecting tools to sustain and foster relational energy's intensity through which it aims to contribute towards augmenting organizational outcomes like job engagement and job performance by uniting all these antecedents and descendants.

*Key words: relational energy, psychological capital, humor, job engagement, job performance.*

## **Digitization of Services at Local Level, Barriers and Perspectives, Case of the Republic of North Macedonia**

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### **Abstract**

Digitization of services at the local level can provide many benefits for the citizens including more efficiency and savings for governments and businesses, increased transparency, and greater participation of citizens in policy-making of their communities. Developments in information and communication technologies have been an enabler of enhanced, citizen-focused services by governments around the world. E-services are widely perceived as a tool for greater citizen access, enhanced democracy, improved information quality, and increased efficiency. Local government has been a key e-government focus for many nations due to the wide and varied interactions these governmental agencies have with citizens. The paper presents findings of exploring the issues and bottlenecks from the perspective of the policymakers, local administrators and citizens in the Republic of North Macedonia. Local government units have been assessed to understand the key considerations related to horizontal and vertical interoperability, administrative capacity and digital divide as crucial components for introducing comprehensive e-services in the local government.

*Key words: digitization, E-service, municipalities, interoperability, digital divide, administrative capacity.*

## **Post Conflict Reconstruction, State-building and the Role of Gender: the case of Kosovo**

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### **Abstract**

The post-conflict reconstruction, that followed the end of 1999 war in Kosovo and the state-building processes after the declaration of Kosovo's independence are characterized by local and international actors' undertakings to transform power relations, political processes and the relationship between state and citizens. These processes, therefore, offer an opportunity to develop Kosovo as a state with transparent and accountable governance, inclusive that offers equal opportunities for men and women, and to provide new opportunities for women to mobilize. Women in Kosovo have made some significant gains in terms of formal equality, however, informal patterns of power and resource allocation have been much harder to shift, and as such the enhancement of the role of women in the public sector and their inclusion in the post-conflict reconstruction and state-building process has often been missed. In this article, we aim to present the challenges and prospects for women's participation in the state-building process in post-conflict Kosovo. First, we will analyze the undertakings by international missions in Kosovo in promotion of women's participation as a part of post-conflict reconstruction, including an analysis of the legal and political measures undertaken by Kosovo authorities in securing the women's participation in important state-building processes. We will also look into the issue of how inadequate involvement of women in the post-conflict reconstruction and state-building processes affects the sustainable peacebuilding and overall development.

*Key words: post-conflict reconstruction, state-building, women's participation, gender equality.*

## **Determination of the Market Concentration on the Oil Market of the Republic of Serbia**

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### **Abstract**

The development of market concentration and competition flows take a long time and the flow itself is expressed in many relevant markets by many concentration indicators. It could be said that they date back to the emergence of production relations and productive forces. That is why it is not surprising that there are different interpretations of these economic categories. The liberalization of the market of oil and oil derivatives in the Republic of Serbia has opened the space for building high-quality competitive relations. Market conditions and competitiveness in practice are determined by concentration in the observed relevant market. One of the aspects of the analysis of the intensity of competition on the domestic oil market is the measurement of the concentration of supply, to which this paper is dedicated.

*Key words: oil and oil derivatives market, concentration indices, competition level.*

## **The Fisermans' Route Project: Informational Heritage and Local Development**

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### **Abstract**

The Porto Accounting and Business School (ISCAP - Polytechnic of Porto) olds the degree in Information and Documentation Sciences and Technologies (CTDI). Some teachers and 3rd-year students (internship) have been developing a project called “The Fisherman’s route”, a joint project between the parish of Vila do Conde and ISCAP that is based on the increasing importance of the informational heritage as an agent that generates value and aims to enhance and disseminate the informational heritage associated with the fishing communities of Caxinas and Poça da Barca, allowing the safeguard of their heritage and simultaneously promoting the sustainable development of these communities. Through this project, it was also possible to infer the importance of the information professional in alternative scenarios and working realities, in this specific case, in the development of a project of cultural and touristic nature. The project demanded the collection of information about the fishing activity of those communities through questionnaires, semi-directive interviews and documentary analysis. The results are e-book with typical expressions of the communities; a recipe book; proposals of merchandising items presented to the parish; a pedestrian route was created where natural and cultural heritage have been identified and described. The following objectives are expected to be achieved this year: Complement information about Points of Interest in the vicinity (and which includes architectural, cultural, museological, ethnographic, archaeological, historical); Structure the information so that it is easily perceived by tourists; Make information available in Portuguese and English creating an app that uses geolocation.

*Key words: local development, informational heritage, library and information professionals, professional competencies.*

## **The Importance of Using Marketing Strategies in the Organization**

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### **Abstract**

Marketing is a process that affects our lives almost every step. We are consumers, but many of us are part of marketing in other forms such as vendors, wholesalers, rivals, suppliers of raw materials and so on. As we know, the concept of marketing is constantly redefined. The purpose of this scientific paper is to identify the importance of using marketing strategies in the organization, namely measuring the impact of using different marketing strategies on organizational performance, identifying whether there is a difference between sectors in terms of expenditures that they dedicate themselves to marketing and verifying whether there is a difference between the regimes in the marketing costs that organizations make. To accomplish this work, 120 businesses have been selected, with the largest number of businesses in the Peja region, the rest of the business sample being concentrated in the Prishtinë / Priština region, while a smaller number of businesses the respondents were taken to businesses belonging to the Dečan / Dečani region. Businesses that exercise their activity in different market sectors. Testing the importance of using marketing strategies in the organization has been achieved with the help of the use of a statistical package for social sciences (SPSS) which has helped us to present through our statistical functions all the necessary results of our research. Analyzes used for generating relevant results are frequency analysis, one-way ANOVA, and cross-table analysis.

*Key words: marketing, organizational performance, acquaintances.*

## **The Role and Importance of Tourism Development in the Republic of Kosovo**

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### **Abstract**

Like every country in the world that has its cultural and artistic conditions and specifics and its social organization with tourist characteristics, Kosovo as a new state carries in itself the cultural heritage intertwined over the centuries, but ruined by the disasters that have followed it for centuries. The biggest event that marked the last decade was the proclamation of Kosovo as an independent and sovereign state, which should be promoted in front of the citizens of other countries. But it also carries with it some challenges it faced both in promoting tourism activities as well as in other activities related to development and tourism. Sovereignty and the declaration of independence was a good opportunity for promotion and the state created its governing mechanisms and took responsibility for creating strategies in all areas of society that have a public interest. The state is obliged to create strategies for the development of the sectors in defence, economy, health, education, tourism, etc. This research paper as the centre of study has the impact and development of tourism in the Republic of Kosovo, trying to show the level of weight that this economic sector has today even though Kosovo is a country with the small territory. Kosovo tourism is an important economic branch, therefore tourism industry in Kosovo has realized 8-10% of the total social production, depending on direct factors (hotel industry, gastronomy) or indirect effects (agriculture, construction, etc).

*Key words: tourism, tourism development, tourism potential, economic development.*



## **Technical and Management Aspects of Wood Industry Related to the Training of Engineers who are Part of this Sector**

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### **Abstract**

Technical aspects in the wood processing entities are closely related to the recognition and application of the new technology. Another very important aspect of these businesses is management. They are employed in these businesses Wood Processing engineers who graduate in the Department of Wood Industry of the Agricultural University of Tirana. In this institution, students, in addition to general knowledge, science and engineering, acquire knowledge of technology and management. This study analyzes the technical and managerial problems of wood industry in Albania; relating to the knowledge of Woodworking engineers. Generally, the faculty is satisfied with the knowledge it gives to the student during the teaching process, internships, until his graduation. After graduation, it is the private sector that practically employs engineers, but it is also an indicator of measuring the degree of their formation. University education of students is very important and is seen by the labor market as a potential for continuous development and progress. The study is based on the analysis of a significant number of questionnaires structured for this purpose. The study shows that newly graduated engineers do not have the proper knowledge of new technologies. Also, it needs to be done in terms of their formation with management knowledge, especially in the conditions of Albania. The surveyed engineers say that they also need to play the role of the manager.

*Key words: wood industry, wood processing engineers.*

**Motivation Impact on Workers Performance (Case Study: Wood Processing Companies in Ferizaj Region – Republic of Kosova)**

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**Abstract**

This paper aims at researching the correlation and impact of monetary and non-monetary motivation on employees' performance. Our study focuses in the factors that influence the employees' work motivation, such as monetary and non-monetary factors, and at the same time in measuring the relationship that exists between work motivation and job performance. This research is based on mixed research methodology (qualitative and quantitative). In quantitative terms, data collection was used through a structured questionnaire sent to respondents online and on the field. While the quality aspect is implemented by using secondary sources such as similar research information from the web. The results proved to have a positive relationship between employee performance and monetary and non-monetary motivation. And also according to empirical analysis, we conclude that non-monetary and monetary motivations affect the performance of the workers in the wood processing companies in Ferizaj region.

*Key words: monetary motivation, non-monetary motivation, employee performance.*

## **Entrepreneurship and Firm Growth in Transition: The Case of Kosovo**

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### **Abstract**

This study explores the development of entrepreneurship in the transition phase and integrations processes with particular emphasis on challenges of firm growth and development in Kosovo. Moreover, this is an investigation of the perception of small business owners/managers on specific obstacles to growth and develop their businesses. This paper is supported by a special empirical study based on a survey conducted with 200 businesses including 7 regions of Kosovo. It was organized in the first half of 2017 directly with key business actors which identified the main problems of entrepreneurship development and business growth. However, various obstacles have been identified, mainly related to the internal and external environment of doing business. From the data obtained from the field, statistical factor analysis has been done to measure the impact of various variables on business growth. Additionally, data analysis shows that there is a close correlation between the obstacles and the growth of businesses. Various groups of obstacles have been identified as the financial, legal, market, transport and obstacles related to human resources development. The research results raise important issues for discussion and recommendations regarding applications of policies and strategies for the development and growth of businesses in Kosovo.

*Key words: entrepreneurship, firm growth, transition, obstacles.*

## **Impacts on Economy and Tourism in Kosovo Caused by the Covid-19 Crisis**

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### **Abstract**

As COVID-19 reaches everywhere, low- and middle-income countries are racing to respond to this massive and fast-moving challenge. Household income, especially for the poor, will be hard-hit, linked to disruptions in tourism and declining remittances. The economic impacts of the COVID-19 crisis are increasingly hitting low- and middle-income countries and the poor. International travel restrictions and the full or partial closure of businesses and industries in Asia, Europe, and North America have led to a collapse in global travel and are expected to reduce the flows of remittances. Tourism and remittances are important sources of employment and incomes for the poor, respectively. This post assesses the potential impacts of the expected reductions in these income flows by using Kosovo as a case study. The pandemic is likely to have a significant economic toll.

*Key words: tourism, economy, Kosovo, crisis, Covid-19.*

## **Customer Complaints in the Energy Sector**

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### **Abstract**

The purpose of this paper concerns the Dispute Settlement Procedures and defending the customer's rights in Energy Sector. Public and private authorities should pay attention and determine the procedures to be followed to increase the quality of public services and contributing to economic development growth. The article aims to present that some improvements have been done toward protecting the customer's rights in administrative level disputes by responsible authorities. The study aims to present the requirement for changing a few legal and sub-legal provisions in force, which are causing concerns in practice for both institutions and customers. The energy sector faces many challenges, among which is the regular supply of electricity and customer protection. In this regard, it is important to continuously address issues that would contribute to improving the performance of the competent institutions and improving the quality of power supply. Furthermore, the right to appeal is a right guaranteed by legal provisions, so public and private institutions should be careful when dealing with customer complaints, acting by the main principles of justice.

*Key words: complaints, customers, energy sector, courts.*

## **Challenges and Perspective of Tourism After Covid-19 Pandemic. Case of the City Of Vlora**

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### **Abstract**

The global developments of the covid-19 pandemic have affected the economies of each country in all their sectors, developed or not. Albania is a country with a rich tourist offer where in the last three years it has experienced only an increase in terms of the number of tourists but also income from this sector. Vlora is a coastal city and with a diversified tourist offer (maritime tourism, mountain tourism, agritourism, etc.) contributes every year to the Albanian economic growth. This paper seeks to focus in one hand on the challenges facing the tourism sector as a result of the pandemic, especially in this city, analyzed with more focus on the period of the tourist season summer 2020, and on the other hand also in identifying the prospects of this sector. The research methodology will be based on secondary literature (paper, reports and observations, publications) but also on empirical data that will help analyze the current situation of this sector (both primary and vital especially for the small family business as an important business link in the city). At the end of the analysis, the paper aims to identify some proposals and recommendations regarding mechanisms for sustainable tourism offer and to continue further with the development and enrichment of this sector.

*Key words: sustainable tourism, challenges, development, COVID-19.*

## **4. Information and Strategy**

- E-business
- Benefits from Information Systems
- Globalization and Information Systems
- Small Medium Enterprise and Information Systems
- Public Administration (policies and regulations)

## **Higher Education in the Era of Globalization and Technology: The Case of Kosovo**

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### **Abstract**

The impact of globalization combined with technology advancement on economy, politics, and society is ongoing. Such impact is reflected in the education system as well as supporting development and competitiveness in the knowledge economy. Internationalization of higher education is the result of globalization, and integration of information systems is affecting the evolution of these institutions and stimulating education reforms as well. As a response, the Higher Education Institutions in developed countries are focused on developing programmes and supporting individuals to increase and apply know-how knowledge, in line with the needs of the global market, and enhance the use of information and communications technology to connect the education system with communications networks and facilitate the learning process. Kosovo is not an exception to the changes that globalization and the information technology have brought about in higher education in Europe and worldwide. The process of internationalization and utilization of IT in the education sector has continued to accelerate in the last decade. This is best indicated when due to the outbreak of the COVID-19, Universities within a week have moved from in-class learning to online teaching. Therefore, this study investigates the impact of globalization and technology on the higher education sector and the national policy reforms toward internationalization and digitalization.

*Key words: education, globalization, information systems, internationalization, digitalization.*



## **Service Centre in the Function of Delivering Value to Citizens**

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### **Abstract**

When the public sector is mentioned in everyday speech, the first association of citizens is related to the cumbersome state apparatus with complicated procedures. Numerous challenges of organizational, managerial, systemic, marketing, informational and communication nature certainly hinder and do not contribute to the efficiency of the administration's work. To avoid this identification, the state must improve the delivery of value to citizens. By developing multidimensional activities in the public sector, it is possible to actively influence the improvement of services to citizens in providing personal and other documents, their satisfaction with the services provided and improving the reputation of the public sector in the surroundings. The emphasis is on achieving synergistic effects through strategic harmonization of certain dimensions of the service program for citizens. Citizens' expectations (and analysis of their level of satisfaction with services provided in the past) are essential and the basis for creating multidimensional activities that should contribute to improving public sector services. The goal of this research task is to conceptualize an adequate combination of service activities programs by the requirements of citizens and deliver them such value (quality, service, price ...) that will meet their expectations. This is a creative aspect of improving the work of the public sector. The results of the research indicate that the best combination of 8P (product, price, promotion, place people, process, productivity-or performance, physical evidence-or philosophy) must create a new quality of services to citizens exemplified in an integral, consistent and unique program. Full harmonization of elements of the program of service activities leads to the satisfaction of citizens' expectations while minimizing the costs of services provided, but also to increase the image of the state in the international community.

*Key words: service centre, public sector, marketing tools, value delivery.*

## **Designing Server Infrastructure for the Banking Sector**

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### **Abstract**

Designing a server infrastructure for a banking system presents different challenges, unlike other sectors. Due to the high sensitivity of the data that should be stored and processed in such a system, all of these data should be in a local data centre. We are witness of bank transactions that during the payment period and monthly payroll distribution, create a close bottleneck of the server system and submit delays of payments execution and their security is weak when there is a delay in the server banking system. In this paper a server infrastructure will be designed to eliminate the bottleneck and speed up banking transactions, as well as the security should be at the maximum level as well as the efficiency of digital services. The three layers working method must be taken into account, the physical design of server infrastructure, organization of equipment within the bank centre data, and network extension within the banks.

*Key words: bank, design, infrastructure, equipment, network.*

## **Data Mining Strengthening Decision Making in Criminology**

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### **Abstract**

Data mining has a wide application domain in almost every industry where the data is generated. That is why data mining is considered as one of the most important factors in database and information systems. Data mining is a process of extracting knowledge from huge amounts of data stored in databases and data warehouses. Criminology is an interesting application where data mining plays an important role in terms of prediction and analysis. Crime analysis plays an important role in devising solutions to crime problems and formulating crime prevention strategies. The purpose of this paper is to evaluate the performance of data mining methods, which can be used for analyzing data collected from the past crimes. We identified the most appropriate data mining method to analyze the collected data from sources specialized in crime prevention by comparing them theoretically and practically. This study helps the crime branch for better prediction and classification of crimes.

*Key words: information systems, decision support, data mining.*

## **Development Strategy of the Municipality of Prishtina as the Capital of Kosovo in Relation to the Strategies of the Capitals of Regional Countries**

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### **Abstract**

Competitiveness is becoming more and more a regional issue-oriented to meet the needs of the economy and citizens, so economic development is essential for the survival of all cities. Economic growth, made as a result of an economic development plan, brings new capital to city governments by expanding the tax base to further develop as well as improve the quality of life in general. This enables the creation of a more suitable and competitive economic environment at the local level. Sustainable economic development is done through the Development Strategy which comes in response to rapid change, keeping under control the conditions in which stakeholders will have a constructive approach to assessing the situation, taking specific actions to enable the city so that the changes are not dramatic. Thus, the city strategy should improve regional competitiveness, based on factors such as cultural heritage, demographic movements and social change. All Regional Development Strategies are oriented towards long-term trends that directly maintain the competitiveness of the city identified as (1) urbanization and demography, (2) increasing inequality, (3) sustainability, (4) technological change, (5) industrial clusters and global value chains; and (6) governance. The conception of the Development Strategy is usually done by creating the appropriate climate for sustainable development, making adequate policies in business support, the growing importance of information and communication technology, social and intellectual capital in profiling the competitiveness of cities.

*Key words: strategy, development, city, competition, sustainability.*

## **Digital Transformation of Food Processing Industry - a Way to Improve Competitiveness in the Global Market**

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### **Abstract**

In the age of the digital economy, the market conditions are inviolable, due to the changes in consumer behaviour. The term digital transformation is the second name for the fourth industrial revolution, which is being held under the influence of technological innovations. It refers to organizational restructuring due to the application of new information and communication technologies. Due to the digital transformation, there is a radical change in business – it moves from traditional business methods to digital business, which significantly accelerates market activities. Development of digital technologies in the business such as several varieties of e-commerce, app stores, online advertising, cloud computing, participative networked platforms, high-speed trading, as well as online payment services influence companies to change their business to be competitive. Food processing industry in the digital economy consists mainly of small and medium enterprises. Its comparative advantage is the flexibility of the production process and easy adaptation to market needs. The main problem in this industry is insufficient visibility, small capacities and production fragmentation. One of the ways to help companies in the food processing industry is to be acquainted with modern possibilities of technological development as well as to assist in the digital transformation of companies. This paper presents the process of the digital transformation of a company in the food processing industry.

*Key words: food processing industry, digital transformation, information systems.*

## **Applying Artificial Intelligence Techniques to Improve Company's Internet Presence Strategy**

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### **Abstract**

Quality and complete internet presence of the company requires the development of an Internet presence strategy, as a starting point for all subsequent steps in the development of an online presence in the market. Today's level of complexity of internet communication, when practically complete both external and internal business communication takes place through online channels, does not allow the internet site to be viewed as an isolated place "somewhere on the Net". Also, modern business and communication are unthinkable without numerous software and hardware solutions that are prerequisites for business activities in today's digital age. More deeply, the digital transformation of the company is the concept for the integration of digital technology into all areas of a business, resulting in fundamental changes to how businesses operate and how they deliver value to customers. The process of digital transformation is performed by applying modern artificial intelligence techniques, such as intelligent data analysis, machine learning as well as deep learning. In that way, by using the digital technologies the management of the company can make decisions more easily. On the other hand, intelligent analysis of user experience in the company's online presence can help in the development of long-term relationships with consumers, as well as creating the loyal customers, which is the main goal of successful business in today's digital age. This paper presents the way for applying artificial intelligence to improve the company's Internet presence strategy, as an integral part of the digital strategy in the modern digital era.

*Key words: artificial intelligence, digital marketing, e-business.*